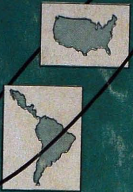

technical cooperation in Latin America

Recommendations for the Future

by the

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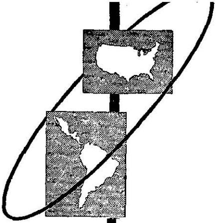

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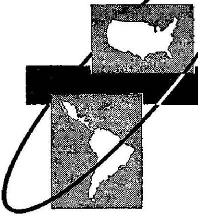

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BACKGROUND AND APPROACH

THIS COMPREHENSIVE REPORT on *technical cooperation in* Latin America grows out of a three-year effort of the National Planning Association in which about 50 individuals have directly participated. They have served in this joint effort as members of a special NPA policy committee, or as research staff or consultants.

By 1953, a number of public agencies and private groups in the United States were sharing their knowledge and skills with the people and governments of other countries. Most of them, however, were working independently. While it seemed likely that technical cooperation programs could become an increasingly constructive element in international cooperation, all too little was known about them. No thorough organized effort had been made to determine the extent to which this sharing of useful knowledge was helping the underdeveloped countries to help themselves or to see what its benefits—tangible and intangible—were to the United States.

Discussions with informed leaders in this field and with policy makers, administrators, and technicians who were actively at work in public and private technical cooperation programs clearly indicated that a review and evaluation of the purposes, methods, and results of such programs would have wide usefulness, in both administering present programs and planning new ones. It was felt, further, that all concerned would have greater confidence in the findings if a critical analysis were made by an independent organization not involved in any of the public and private programs.

The National Planning Association's decision to undertake a far-reaching study of technical cooperation programs in order to gauge their potentialites and limitations in Latin America grew out of these discussions. The study was purposely concentrated on activities in Latin America—not because they were necessarily the most important or the best programs in the world, but because technical cooperation programs have been underway longer there than elsewhere and, until recent years, on a larger scale. Also, a great diversity of programs has been developed in Latin America. This diversity came about because the programs were created under a wide variety of auspices and conditions—sponsored by private foundations, the government of the United States, international organizations, religious groups, universities, trade unions, and business firms—each with somewhat different objectives. The programs also differ because the level and pace of development vary greatly from one Latin American country to another, as do the political and social settings in which the programs operate. It was hoped that an intensive study of the rich experiences of the public agencies and private groups which have sponsored these

programs under such diverse and complex circumstances would furnish important practical guides for technical cooperation.

Early in 1953, the Ford Foundation made a grant of $440,000 to finance the NPA Project on Technical Cooperation in Latin America. The Ford Foundation is not, however, to be understood as approving by virtue of its grant any of the views expressed in the research studies or the policy statements growing out of the Project.

In accordance with NPA's established procedures, a Special Policy Committee on Technical Cooperation was formed to help plan the Project, to consider the products of staff research, and to make recommendations on policy issues that confront the United States and Latin America in the fields of technical cooperation. This Committee is composed of U. S. and Latin American leaders from agriculture, business, labor, education, health, and other fields, to insure that its recommendations take into account the experience and views of such broadly based representative groups. Laird Bell, a senior partner of Bell, Boyd, Marshall & Lloyd in Chicago and a trustee of NPA, is chairman of the Special Policy Committee.

Theodore W. Schultz, of the University of Chicago and also a trustee of NPA, has organized the plan of study as director of research and has selected the research staff of the Project. He and his research associates have made first-hand observations in all 20 Latin American republics. While there, they consulted with people concerned with technical cooperation activities in public agencies and private groups. Their detailed findings are presented in a number of monographs which are being published by the University of Chicago Press.

The preparation of this over-all policy report *Technical Cooperation in Latin America—Recommendations for the Future* has been one of the major activities of the Special Policy Committee. It has involved many long discussions in which the Committee drew upon the findings of the research staff as well as the special knowledge of Committee members.

Throughout the Committee's considerations, it has endeavored to discover and appraise the attitudes of Latin Americans toward technical cooperation. As a group and as individuals, the members have studied the scope and content of the many and varied programs of the U. S. and Latin American governments, the United Nations and the Organization of American States, and the private groups—the business firms, religious groups, foundations, universities, trade unions, and other private organizations. The Committee knew that many piecemeal efforts had been made to evaluate the programs of particular agencies and groups. From the beginning, it was concerned with the interrelationships between all of the programs, as well as with the accomplishments, organization, and administration of each. This report,

for the first time, considers the entire technical cooperation effort in a large region of the world.

Convinced from its studies that technical cooperation should be continued, but that it can be improved greatly, the Committee in this report presents its recommendations for the future. In line with NPA's established publications policy, members of the Committee had the opportunity to submit for publication with the report signed comments on the report as a whole or details in it. It is noteworthy that no members had any footnotes to accompany the report.

In addition to preparation of this over-all report, the Committee has issued interim reports on policy matters which in its opinion warranted special attention. It also has published one case study, and may issue others, of particular programs as illustrations of a few of the problems which are common to many of the activities studied in the NPA Project. (A list of the Committee's reports published to date in a special series of NPA pamphlets faces the contents page of this report.)

The National Planning Association is grateful for the Ford Foundation's financial support, and is deeply indebted to all who are contributing to this Project: to the Special Policy Committee members; to the Project's research staff; and to other individuals—too numerous to list—in Latin America and the United States, in the United Nations and its specialized agencies, and in the Organization of American States, for their invaluable cooperation and generosity with time and knowledge.

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PREFACE

THE PURPOSE OF THE STUDY resulting in this report has been to assay the effects of technical cooperation in Latin America in recent years. People of the less developed countries everywhere are determined today to have better levels of living. The Latin American countries are on the march. They will progress with or without help, but haphazardly, unevenly, slowly, and with much waste motion if they are not given some kinds of help. Technical cooperation can give direction and encouragement and expedite the whole development to the mutual advantage of all concerned.

The study was started in 1953 by the National Planning Association through a Special Policy Committee on Technical Cooperation, and a research staff directed by Dr. Theodore W. Schultz, of the University of Chicago. Dr. Schultz and his associates have visited all of the 20 Latin American republics, some of them for considerable periods. Voluminous reports have been prepared by the staff, which in turn have been considered in extended sessions by the whole Committee, and in numerous meetings of subcommittees appointed to deal with detailed phases of the material. Our report is submitted as the result of the studies of the staff, the independent consideration of the studies by the Committee, and the individual knowledge of many members of the Committee having special familiarity with Latin America.

A number of staff reports are being published at irregular intervals by the University of Chicago Press. Studies have been made on the following subjects: the administration of technical cooperation, by Philip M. Glick; technical cooperation in education, by Armando Samper; technical cooperation and foreign policy by George I. Blanksten; technical assistance activities of religious agencies, by James G. Maddox; the transfer of technology by private business firms, by Simon Rottenberg; technical cooperation and agricultural development, by Arthur T. Mosher; university contracts for technical cooperation, by R. E. Buchanan; training programs within technical cooperation, by James G. Maddox and Howard R. Tolley; and ways of improving the distribution of technology among countries, by Theodore W. Schultz. The published reports of these studies will be the sole responsibility of the authors. But they have been building stones for the NPA Special Policy Committee in its efforts to resolve policy issues in the area of technical cooperation.

Too many persons have contributed to the study and to this report to permit individual mention of each, but it is only appropriate for me

as Chairman to take this occasion to thank the members of the Committee for the many arduous days of meetings, and even more time spent in preparatory study, the only reward for which has been satisfaction, I trust, in the result. And the Committee will surely want me to express their gratitude to the staff for their devoted work, under the wise direction of Dr. Schultz, in investigating; their skill and insights in evaluating the information; and their unlimited patience as we tore apart and rewrote their fondest products. We are especially grateful to Dr. Mosher, to Howard R. Tolley, and Virginia D. Parker for their work with the Committee in preparing this report, and to Helen W. Johnson for her work on the Statistical Appendix.

LAIRD BELL, *Chairman*
NPA Special Policy Committee
on Technical Cooperation

LIST OF ABBREVIATIONS

ACAR	Association of Credit and Rural Assistance (in Brazil)
AFL	American Federation of Labor
AIA	American International Association for Economic and and Social Development
CIO	Congress of Industrial Organizations
ETAP	Expanded Technical Assistance Program (United Nations)
FAO	Food and Agriculture Organization (United Nations)
FOA	Foreign Operations Administration (United States)
ICA	International Cooperation Administration (United States)
ICAO	International Civil Aviation Organization (United Nations)
IIAA	Institute for Inter-American Affairs (United States)
ILO	International Labor Organization (United Nations)
ITU	International Telecommunication Union (United Nations)
OAS	Organization of American States
ORIT	Inter-American Regional Organization of Workers (Western Hemisphere branch of International Confederation of Free Trade Unions)
PASB	Pan American Sanitary Bureau (Organization of American States)
TAB	Technical Assistance Board (United Nations)
TAC	Technical Assistance Committee (United Nations)
TCA	Technical Cooperation Administration (United States)
UMW	United Mine Workers of America
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNTAA	United Nations Technical Assistance Administration
WHO	World Health Organization (United Nations)
WMO	World Meteorological Organization (United Nations)
World Bank	International Bank for Reconstruction and Development

TECHNICAL COOPERATION IN LATIN AMERICA —RECOMMENDATIONS FOR THE FUTURE

A Statement by the NPA Special Policy Committee on Technical Cooperation

I.

Better Technical Cooperation

THE PRINCIPLE underlying technical cooperation is simple. It is the systematic sharing of technical and scientific knowledge and skills among peoples of different countries.

Such sharing goes far back in history. Individuals and voluntary groups in the United States and Latin America have been sharing knowledge and skills for a long time. Religious groups have pioneered in dispensing technical assistance along with their missionary activities. United States businessmen have brought to Latin America not only commerce and industry but also significant technical improvements. United States foundations have made distinguished contributions of direct technical assistance.

Public programs of technical cooperation are of recent origin. When World War II broke out in Europe and threatened to spread across the Atlantic, the U. S. government, seeking closer ties among the American republics, began to cooperate with Latin American governments in programs to increase the production of food and other materials and to improve the health and welfare of their peoples.

In 1949, the announcement of what has come to be known as Point 4 aroused interest throughout the free world. The following year, Congress converted the idea into law. By passing the Act for International Development, it initiated a new level of organized governmental technical exchange in peace time. In that same year, the United Nations embarked on its Expanded Technical Assistance Program, and the Organization of American States—which had been created in 1948 by the United States and the 20 Latin American republics as a regional organization associated with the United Nations—inaugurated a program of technical cooperation. These programs have grown in variety and method and have been actively pursued ever since. The United States is the leading participant in both the United Nations program and that of the Organization of

American States. Now the Soviet Union has paid technical cooperation the ultimate compliment of imitation. The United States should not surrender its leadership in worldwide technical cooperation.

Governmental technical cooperation was generally accepted as an official policy of the United States for a variety of reasons. There were practical considerations, such as a wish to see the economies of other nations develop and international trade increase. There was the hope that a rising standard of living in underdeveloped nations would lead to peace and political stability and reduce the spread of communism. There was, too, a genuine desire to help the peoples of Africa, Asia, and Latin America. While the people and government of the United States should not make too much of their virtues, their support for the adoption and continuation of the policy contains a substantial ingredient of generosity and altruism.

Raising the standards of living of the international community is now part and parcel of U. S. foreign policy. When the United States first got into these programs, they were considered to be only temporary. But long continued efforts are required to achieve substantial economic development. The differences in levels of living between countries will tend to keep increasing unless there are continuing programs to help less developed economies keep accelerating their production. The mutual benefits from technical cooperation are greater after programs have been in operation for some years than they are at the beginning.

Technical cooperation—public and private—has proved itself. It should be recognized and accepted as a long-range and effective instrument of U. S. foreign policy. In the long run, a main object of U. S. foreign policy is to develop relationships so that the peoples of all countries can live peaceably together, while sharing increasing welfare in an atmosphere of genuine democracy and freedom. Technical cooperation is an instrument admirably adapted to this long-range policy. It should be expanded judiciously and its administration improved. Current programs are far from perfect, but most of the faults are curable.

What was at the beginning labelled "technical assistance" has rightly become "technical cooperation," for it is a two-way street. Unquestionably, with the great physical resources and technical knowledge of the United States, the bulk of the flow has been toward Latin America; but as time has gone on the reverse flow has become apparent. Sometimes the flow to the United States has been in scientific lines, as in the control of diseases and pests; sometimes in cultural

lines, such as striking developments in architecture. Sometimes the flow has been less tangible—the advantages of really learning about the cultural achievements of people in neighboring countries; and, even more intangible but real, the benefits from the very fact of peoples working peaceably together.

This concept of technical cooperation is something quite different from what is known as economic aid. In technical cooperation, the United States contributes men and experience, and only the dollars that are necessary to make them effective agents. In some countries, the dearth of capital for economic development—roads, dams, and the like—may make it futile to share only knowledge and skills unless elemental requirements for capital are also met. This is especially true in many countries in Asia and Africa. The International Bank for Reconstruction and Development and the Export-Import Bank have made a substantial number of development loans to the Latin American republics, but the U. S. government has made relatively few grants for economic aid. In 1954, the total contribution of the United States for the entire bilateral technical cooperation in all of Latin America was only $22 million.

Some countries receiving loans and grants for economic aid and developmental assistance need technical cooperation in order to use the funds effectively, and in some countries technical cooperation cannot be effective without simultaneous economic aid. In such cases, the two programs should be closely related. On the other hand, technical cooperation should be kept quite separate from military aid and short-run international trade policy.

The benefits of technical cooperation are in fact something much more than can be measured in dollars or tons. The promotion of hospitals, health education, and training centers shows the way for the peoples of Latin America themselves to improve conditions. Cooperative research in agriculture and demonstration and extension work make it possible for them to improve their own production. Cooperation between U. S. universities and those in Latin America stimulates the development of university faculties in scientific and technological fields, and helps them meet the demands of today without impairing their strong tradition of emphasis on the humanities. Cooperative teacher training institutions help the countries to meet their own needs for increasing literacy. Technical cooperation emphasizes family welfare, home economics, and programs for farm women in order to help satisfy the demand for higher levels of living. Projects in public administration and aids to industrialization have the same pur-

pose—that of helping the people of host countries in all these lines to advance their own cultural and economic development.

The Latin American scene in which these programs operate differs greatly from country to country and from area to area. Programs need to be tailored to the different situations. However, our brief recital in Chapter II of the economic and cultural environment in Latin America shows that, in all, the pace of development has steadily increased in recent years. Yet it shows, too, that throughout Latin America there are retarding factors which make it difficult to overcome the persisting poverty of large masses of the people. The great majority of Latin America's rapidly increasing population depend on agriculture for a livelihood, and most farms are small and primitive. Most of Latin America's manufacturing and retail trade is still undertaken by firms using old-fashioned methods.

Illiteracy and a serious shortage of primary and secondary schools, particularly for children in rural areas, exist throughout Latin America. And the curricula in these schools, like those of the institutions of higher learning, stress academic learning with little or no attention to vocational or scientific training. Latin America has made remarkable progress in combatting disease and malnutrition since the turn of the century, but there is still a great need for improvement.

Governmental authority in most Latin American countries is centralized in the national capitals; this discourages initiative by the states, municipalities, and local governments. The large numbers of poorly educated citizens have little interest in or ability to exercise a voice in their government.

Latin America is rich in human and physical resources, whose potentialities need to be more fully developed. To do so will require rapid development on many related fronts—agriculture, health and sanitation, education, transportation, power, and industry, among others.

Some of the characteristics of technical cooperation which permit it to be tailored to widely differing needs for assistance, are described in Chapter III. There, we also discuss the weaknesses and strengths of methods of operation used in the public and private technical cooperation programs. Three devices permit the greatest amount of cooperation in planning and administering programs. One is the servicio, a device invented and used with success in the Western Hemisphere. This is a semiautonomous agency established within a ministry of the host government. The chief of the technical mission usually is director of the servicio; but sometimes he is codirector. He

is responsible both to the minister and his own government. Foreign technicians and officials of the host government work together on an agreed technical cooperation program and have a considerable amount of administrative freedom and flexibility. Another of these devices—the operating mission—is less formal than the servicio. The operating mission usually cooperates with a host government in initiating or expanding a particular on-going governmental activity, but the minister of the host government retains complete administrative authority. Third is the university-to-university contract under which a U. S. university cooperates with a Latin American university in developing or expanding faculties and facilities designed to serve better the developmental needs of the host countries. Somewhat less joint action usually is involved when the devices used are advisory missions, visiting professors, or awards of grants or fellowships to Latin Americans for special training. However, these devices all play an important role, when properly used, in technical cooperation programs.

An effort has been made in Chapter IV to show the type of technical cooperation programs in Latin America and—by describing a few of the public and private programs—to show how they operate and what they are accomplishing. Our summary of programs in Latin America shows that by far the greatest attention is being given to needs for more knowledge and skills in health, education, and agriculture. But it also indicates a rise in programs to improve public administration procedures, and there are an increasing number of programs in mining, industry, transportation, labor, and community development. The United States and the United Nations and its specialized agencies have programs in all of these fields. The Organization of American States has concentrated its activities on the establishment of regional training centers in Latin American countries. The foundations and religious groups have given major attention to health, education, and agriculture; and U. S. business firms operating in Latin America and U. S. trade unions naturally have given highest priority to their special interests in their efforts to help improve skills and productivity.

Have these efforts been worthwhile?
Our answer is unreservedly: Yes.

We have no question that the over-all results of technical cooperation have been good, not only for the Latin American countries, but also for the United States, and for all participating agencies and

groups. The value put upon technical cooperation by the host countries is demonstrated by their growing contributions to the joint enterprises. Their shares vary, of course, from country to country, and from program to program. But for the bilateral program, the *contributions of the Latin American countries* were reported to be more than $46 million in 1954—over twice the U. S. contribution. Many projects have been transferred entirely to the host governments. It is perhaps even more significant that the programs have been little affected by changes in the top administrations in the host countries.

While we are convinced that technical cooperation has provided an unusually large return for a relatively small investment of money, men, and effort, we *have found ample evidence that there is room* for improvement of both public and private programs. Because our study encompassed such a wide range of activities by both public agencies and private groups, we have a great many recommendations. These, presented in Chapters V, VI, and VII, range all the way from such details as a shift of emphasis in a particular field of activity to broad questions of national and international policy. Among these recommendations, we urge that high priority be given to those designed to overcome long-standing problems which have reduced the impact of both public and private programs in host countries. These problems, which cut across programs in all fields of activity, are:

- The absence of administrative, legislative, and financial continuity and stability.
- Too little delegation of authority to field staffs for planning and operating the programs in host countries, but not enough technical guidance from headquarters.
- Inadequate coordination of bilateral, multilateral, and private plans and programs.
- Ineffective policies and procedures for recruiting, training, and retaining able personnel.

For technical cooperation to be most effective, the host countries should know that it will continue from year to year. For the bilateral program, the U. S. Congress should take the action which is usual in case of continuing activities. Congress makes only annual appropriations, but when it has adopted a policy which involves con-

tinuing expenditure, it "authorizes" appropriations to be made without limitation of time. Then the amounts are determined annually, but the purposes do not have to be considered anew each year. Such authorization for technical cooperation—now lacking—would be notice to the world that it is accepted as a continuing policy.

Like the U. S. Congress, the governing bodies of the Organization of American States and the United Nations and its specialized agencies also should authorize annual appropriations. We urge, too, liberal appropriations for technical cooperation to these international organizations. In certain types of work they have advantages over U. S. bilateral programs. We, therefore, believe that the United States should increase its appropriations to the technical cooperation programs of the international agencies as rapidly as is possible without increasing the U. S. percentage of the budget of each agency. It would not be wise for the United States to acquire a more dominant position in such agencies, but it should urge other nations to contribute larger amounts to the joint efforts.

All the cooperating agencies—the United States, the international agencies, and the host governments—are faced with difficult and delicate organizational and administrative problems. It is ironic that the United States, which has long been exporting skills and techniques, should itself have been guilty of so much organizational instability. There were four major reorganizations in five years, accompanied by shifts in policy and radical changes in administrative personnel. Even the names of the agencies have changed repeatedly. All of this results in bewilderment in the host countries. Happily, the administration has now been put into the International Cooperation Administration in the Department of State. This agency should cooperate closely with other agencies of the U. S. government, but should not divide its responsibility for technical cooperation with them. It should be given top management of proved ability.

Similarly, administrative instability and uncertainty have characterized the programs of the United Nations agencies and the Organization of American States. There are many faults in their present organizations and procedures; remedial measures have been proposed and discussed at great length, and some action should be taken without further delay.

The headquarters offices of all the agencies have been guilty of the usual bureaucratic faults of trying to answer questions which only the men on the firing line can answer. Circumstances and needs differ widely from country to country and from time to time; the

field staff is sensitive to local conditions and should be free to adapt operations to them. Agency headquarters should determine the areas in which cooperation is to be offered and the general lines of policy to be followed, but the field officers should have flexibility in actual application of policy. Program planning within the limits of budgets and general policy should be done country by country. Every program should be carried on cooperatively with a particular ministry or other agency in each country, and designed to strengthen and supplement domestic programs there. Field administrators and the personnel who know the country should have wide latitude in the selection of specific cooperative projects and in negotiating the amount and type of participation.

In each country, representatives of the international agencies and the U. S. and host governments should keep each other fully informed concerning the status of on-going projects and plans for new ones, to insure that there is no duplication and that all of the cooperative programs help the host country in its drive for economic and social development.

A major need in both bilateral and multilateral programs is able professional and administrative personnel. No system will work without good personnel and, as has been demonstrated in some places in Latin America, good personnel can accomplish much even with a poor system. Considering the obstacles, a surprisingly large number of dedicated administrative and professional men and women, both in the U. S. and international agencies, have entered and stayed with the technical cooperation programs. But there have been too many who have not measured up. The Latin Americans are quick to identify the misfits and justifiably feel let down when they see that a cooperating agency has sent them incompetents who would not be missed. Members of the field staff are "shirt-sleeve ambassadors." Personnel adequately trained for their tasks, sympathetic to the customs and feelings of their host countries, with reasonably long service in a given country—such personnel can add immensely to the effectiveness of the programs they help to administer.

The personnel problem can be solved. In the United States, steps should be taken to establish a "core" career service for technical cooperation, with security of tenure and a system of merit promotion. Administrative and professional employees serving abroad in technical cooperation programs should be given Civil Service status or placed in the consolidated career service. Security clearances should be completed more rapidly; and political clearances—which

were made a standard operating requirement under the Foreign Operations Administration—should be discontinued entirely.

The United Nations and its specialized agencies are having similar personnel difficulties, but little attention has been given to establishing policies designed to attract competent personnel for long periods of service. All of the United Nations agencies have well-established career services for the personnel in their "regular" programs, but they are not open to field employees in the technical assistance program.

The Organization of American States has formally resolved that employees in its technical cooperation program are not "part of the permanent personnel of the agency." Technicians are offered only short-term assignments and the turnover has been high.

This personnel problem should have first claim on the attention of the International Cooperation Administration, the United Nations, and the Organization of American States. The achievements of technical cooperation, despite some shortcomings, have been too valuable to permit further progress to be blocked by lack of suitable personnel.

With improved administrative procedures and a larger number of trained, long-service employees, it should be possible to plan and administer programs which will have greater immediate as well as a lasting impact. The United Nations, Organization of American States, the U. S. and Latin American governments, and the private groups, should continue to help meet the large demand in every country for progress in health and sanitation, education, agriculture, and public administration. All public agencies and private groups should continue their efforts to develop worthwhile and acceptable programs in industry, mining, labor, transportation, low-cost housing, community development, and other fields in which technical cooperation has begun more recently.

The general public in the United States and in all the countries of Latin America knows far too little about technical cooperation —its aims and objectives, its accomplishments to date, and opportunities for the future. Some in the United States feel that it is an outmoded element of foreign policy, and a useless expenditure of both public and private funds. Some in influential positions in Latin America still feel that it is primarily an effort of the government and people of a foreign country to impose a strange way of life upon them. These misconceptions need to be dispelled. The people of the Latin American countries and the United States need to under-

stand the real meaning of technical cooperation, and the mutual benefits they can reap from continued and expanded programs. We, therefore, urge the governments of the United States and Latin America and all private groups to increase their efforts to help the people understand the aims and objectives of technical cooperation and its role in world affairs.

We emphasize the role of nongovernmental groups—religious groups, foundations, trade unions, and business firms. The governmental programs are new and present new problems in foreign policy and intergovernmental relations. Private groups have greater freedom in the choice of projects and methods of operation. Both public agencies and private groups should make special efforts to plan and carry on their programs so that they will complement each other as much as possible.

The U. S. program of bilateral technical cooperation, we conclude, should be regarded as a continuing instrument of U. S. foreign policy. It has proved effective in Latin America. It has been good for the United States and for the Latin American countries. Though its operation has not been as good as it should have been, the faults are traceable largely to defects of administration which are for the most part curable. It should not be confused with economic aid or tied to military assistance; in the interests of the United States, it should be continued indefinitely as a long-range policy. Technical cooperation should be judiciously increased from year to year and its administration immediately improved.

II.

Economic Development and Cultural Change in Latin America

PROGRAMS OF TECHNICAL COOPERATION seek to facilitate social and economic development in Latin America. This aim implies correctly that Latin America urgently needs development. But it is too easy to leap from that fact to the generalization that Latin America is uniformly underdeveloped. On the contrary, there are wide variations among Latin American countries in their needs for social and economic development and in the effectiveness of their domestic programs.

Latin America has a long history of economic, social, and political advances. These countries certainly are underdeveloped in the sense that all of them have resources which are capable of much greater productivity than at present; surely all have human resources with far greater potentialities than are being used at present. But in recent decades, the pace of development in Latin America has been stepped up. Technical cooperation programs can be most effective when based on an understanding of the history, characteristics, and results of the kinds of development which are already underway. (For background data on Latin American countries and overseas territories, see Appendix Tables 1 through 21; for index numbers of agricultural and industrial production in selected countries, see Appendix Table 48.)

One has only to drive through a number of the rapidly growing industrial cities of Latin America to see both that economic development has long been underway and that it has accelerated enormously in recent years. Mexico City, São Paulo, Buenos Aires, Lima, Rio de Janeiro, Havana, and Caracas are spectacular examples. Equally important, however, is the large number of rapidly growing centers of industry and commerce like Bogotá, Monterrey, Belo Horizonte, Santiago, Cali, Guadalajara, Medellin, Guayaquil, Vera Cruz, Montevideo, and those in and about a score of other cities.

The same drive for growth is found in chambers of commerce

and the development corporations which have been established in many Latin American countries. These corporations vary greatly in form and responsibility from country to country. In general, they are autonomous government corporations, with earmarked tax income, set up to undertake particular projects for economic development. Such corporations are created primarily to avoid the hampering effects of frequent changes of political administration and to allow the introduction of more efficient administrative practices than are considered possible in established ministries. In addition, agricultural banks and one-crop associations, for such commodities as coffee, sugar, and cacao, have been created to stimulate agricultural development. Several countries have large irrigation schemes underway; Mexico, in particular, has a long list of completed projects, some of which have been in use for many years. Roads are being built, as are ports and schools and hospitals.

In the industrializing centers and cities, current economic development is so rapid that real estate speculation is one of the more popular and profitable enterprises. These real estate booms, plus new industrial plants of many kinds, have constituted such a heavy demand for capital that other, sometimes more basic, needs for capital have been neglected.

Persisting Poverty

Evidence of industrialization and the existence of scores of government agencies for development do not tell the whole story. There still is continued widespread poverty. Statistics of per capita income give some indication of levels of living, but they can be misleading, particularly in making comparisons among countries. By any standard, however, the level of living of the great majority of Latin American people is much lower than it need be in view of their resources.

A major problem in combatting poverty grows out of the fact that so many of Latin America's people depend upon unproductive, primitive farms for their livelihood. Nearly 60 percent of the total population is dependent upon agriculture. The vast majority of farms are small, the plowing is done by bullock power, often with plows made chiefly of wood, and cultivation is by hand. And there are still large numbers where all field work is powered by human muscles. On the other hand, in some areas—parts of Argentina, Brazil,

Chile, Cuba, Peru, and Uruguay, for example—most of the cultivated land is in well-organized large farms. On these, tractors, insecticides, and fertilizer are used, and other scientific practices followed.

At the same time, there are wide differences in the particular agricultural problems facing different countries, and areas within any one country. For example, the diversity of agricultural problems is very dramatic in a country like Peru, with one type of agriculture in irrigated river valleys crossing the narrow, arid coastal desert to the sea; another type in the high plateaus and in the isolated valleys of the high Andes; and still a third, largely potential, on the eastern slopes of the Andes leading down to the Amazon Basin. Conditions in Ecuador are similar to those in Peru, except that the coastal plain not only is much broader but is a tropical rain forest. Colombia is somewhat like Ecuador, but the mountains are not so high, and over a large region they are green clear to the top with coffee trees covering the mountainsides. The agricultural highlands of the Andean countries are heavily populated by people who are tied by cultural history to their birthplace. But the agricultural population in much of Brazil historically has migrated from period to period abandoning land depleted by one-crop farming to move to new lands and, often, to a new crop.

Domestic programs for agricultural development vary, also. Every country has a ministry of agriculture, but in many countries these are overshadowed in influence by the one-crop associations or other development agencies. In Mexico, for example, a whole battery of government agencies has tackled problems of land reform, irrigation, credit, fundamental education in agriculture, and the distribution of improved seeds.

Traditional practices in much of Latin American business, like those on the backward farms, also slow down efforts to overcome widespread poverty. In all countries, progressive techniques have been adopted by many firms in industry, mining, and distribution. However, outmoded methods continue to result in low productivity in large numbers of firms—some of them one-man operations, others with only a few employees—which still are untouched by the new techniques developed in more advanced Latin American business circles and in other parts of the world.

Many Latin American countries are retarded in their development because progress has touched too small a segment of their people. The masses are relatively unaware of new ideas or techniques.

Retarding Factors

In achieving economic development, most Latin American countries have to swim up-stream against several currents flowing out of their past.

The early European colonists in most of Latin America were from the feudal culture of Spain. The newcomers were bent both on a search for lands and treasure for Spain and on establishing a new Spain in the image of the old. In Mexico and the Andean countries of South America, they found Indians whose own culture was authoritarian. Thus, once the leaders of the Indians had been liquidated, the Spaniards were able to establish a new feudal culture in which the Indians were virtually slaves in the mines and on the haciendas. In order to achieve conditions of opportunity and political independence, it was necessary for movements of independence and revolt within Latin America to overcome their authoritarian past. The relationship of the Indian and European as peon and conqueror created the bicultural populations which Mexico has worked so long to integrate, and with which several other countries still have to cope.

Out of these colonial origins, and the succeeding centuries, flow three strong cultural influences which still affect social and economic development. One of these is a pattern of higher education which, strong in philosophy and the humanities, has been weak in applied sciences, and it has been unavailable to large numbers of the people. A second is the high degree of centralization of authority in capital cities and central governments with little participation in government by large segments of the population. A third is the lack of a widely developed sense of community consciousness.

Not all of these are characteristic of every country, but our generalizations, nevertheless, appear to apply for much of Latin America. Nor is it correct to infer that conditions are not changing. Still these currents from the past are impediments to economic and social development.

Educational Emphases

Three separate educational problems in Latin America still seriously retard every phase of programs for social and economic development. One is the difficult task of reorienting institutions of higher education, which have just pride in their history and cultural achievement, to make them adequate to provide leadership in the whole

range of activities which contribute to economic growth and the general welfare. Another is the problem of overcoming illiteracy and making elementary education much more widely available. The third is to expand secondary education in new forms which will combine training in occupational skills with the general education of citizens.

Latin America boasts the oldest universities in the Western Hemisphere. These, and several of the newer national universities, have played a constructive role in their respective countries. Yet, they traditionally have emphasized classical learning at the expense of experimental research. Moreover, until recent years, higher education has been primarily for the wealthy alone. Those who could afford it went to Europe—especially France—to study; those who could not preferred institutions at home as much as possible like the European models. In most countries, professors receive only nominal salaries. A university professorship is valued for the status it confers, but nearly every professor must earn his livelihood by other employment.

There continues to be more prestige for the liberal professions than for men in engineering, manufacturing, and trade. Seeing other countries forge ahead in applied science and in industrial inventiveness, there has been a tendency for Latin American countries to look elsewhere for machines and methods rather than to reshape their educational patterns in such a way as to foster research and innovation.

Only a little over half of Latin Americans over 10 years old are able to read and write. And in nearly half of the countries, less than 50 percent of children of school age actually attend school. Furthermore, only a small proportion go beyond the third or fourth grade. This fact is emphasized by figures published in 1955 by the Pan American Union for three of the countries in which educational opportunities are relatively good, though not the best. In Brazil's primary schools, in 1950, there were 2,321,000 first graders, but only 334,000 fourth graders. Comparable figures, in 1951, for Colombia are 472,000 and 52,000; and for Costa Rica, 42,000 and 13,000.

The curricula and teaching methods of the primary and the secondary schools, like the universities, emphasize classical learning with little attention to practical and technical subjects or to broad education for adult living. There is a shortage of skilled workers in most of Latin America, and of adequately trained teachers. Most of the rural teachers have had no special training for their tasks.

Long strides have been taken in recent years in elementary educa-

tion, particularly to extend education to more and more people. Yet, the task is so vast that only a beginning has been made. The universities are changing, too. In several countries, impressive new university cities not only draw previously scattered colleges together on one campus, but make physical provision for new faculties in applied science, engineering, and commerce.

Centralization of Authority

There is a persisting centralization of political power although it has long been recognized in Latin America as a serious deterrent to progress. After achieving independence, each Latin American government adopted a constitution which was republican in form. However, the lack of educational opportunities limits both the interest and competence of a large proportion of the population actively to participate in political life.

Some Latin American countries now have effective universal suffrage and widespread dispersion of political power, but in most, there remains a numerically small political elite, expressing the franchise and holding office, with a large majority practically excluded from participation in government. The extension of the political base among the people has moved most slowly in Haiti and in the countries with large Indian populations, with the notable exception of Mexico.

Most Latin American governments not only are highly centralized, but an unusual degree of authority is vested in the president of the country. There is no broad delegation of responsibility, numerous routine checks prevent subordinate officials from making decisions, and the customs of centralization often make subordinate officials dependent and reluctant to exercise what authority they do have.

Equally troublesome are the archaic procedures followed—from sheer habit and the heavy hand of tradition—in doing the public business. Civil services are unstable, government workers often are employed part time and are poorly paid, untrained, and politically dominated. Some Latin American governments have realized the extent of their need for improved practices of public administration. During periods of reform, real progress has been made. Both Brazil and Mexico have worked at improving their own systems, as have Costa Rica, Ecuador, El Salvador, and others.

One of the adverse effects of centralized political power has been the concentration of institutions, public works, and even industries and commerce in the capital cities. It is only in recent years that

this tendency has begun to weaken and that some cities which are not political capitals have begun to achieve all-round development. The shift of emphasis, however, has not yet reached the rural towns or the countryside where most people live. Only in a few instances are the small towns beginning to have the facilities which, had there been local autonomy, they could have developed for themselves long ago.

Except in Russia and in Japan, economic development has been most rapid in countries with the most widespread political participation. With increasing specialization in production, and with the increasing necessity for legislative adjustments to maintain a productive balance as industrialization progresses, only a political system which gives effective voice to all sections of the population can produce the political climate in which economic development can flourish. This, of course, is not the only reason for universal suffrage and representative government. The argument for these goes much deeper into the rights and dignity of the individual. But even on the level of economic productivity alone, the evidence seems clear that effective government by all of the people is more productive than those systems in which some people choose for others, and these others wait for favors from the ruling group.

In summary, the centralization of authority stifles local self-government in Latin America. It encourages a feeling of individual helplessness coupled with dependence on government for everything. It prevents the flowering of competence and inventive genius and stifles business initiative. A growing recognition of these facts has been at the root of strong liberalizing movements in many countries of Latin America.

Social Attitudes

Latin Americans have a very strong sense of family. Family loyalty is good, but there is not the general feeling of responsibility for the welfare of the whole population which the times require. This restricted development of general social consciousness has characterized Latin American culture up to now.

The lack of social concern has found expression during much of Latin American history in many leading institutions: in the military class; in some sectors of the Catholic Church of Latin America; in the public service, and in the record of foreign corporations. However, within recent years an increasing number of actions taken by

each of these institutions indicates a growing sense of social consciousness.

These generalized statements are, of course, subject to many qualifications. They are mentioned here for two reasons. One is to acknowledge the important role of nontechnical cultural factors in economic development. The second is to convey a sense of the balance which is required to have some understanding of the historical and social setting within which programs of technical cooperation and the process of development must take place.

Population Growth

The population of Latin America, in 1954, totaled about 175 million, and it is growing by 2.5 percent each year. If present trends continue, 30 years from now the population may approach about 350 million. This rate of growth is greater than in any other major region of the world. Whereas the rate varies from country to country, in every case, plans for economic and social development must recognize that, if present trends continue, the number of people whom the programs are designed to help may double in the foreseeable future.

Death rates are declining in most countries, largely as a result of efforts since 1900 to provide better health and medical services. Undoubtedly, the decline will continue in the years ahead. Even so, Latin America still has an appallingly high mortality rate and suffers enormous economic loss from illness. It is estimated that life expectancy in Latin America averages about 45 years, as compared with over 70 in Sweden and nearly 70 in Canada and the United States. Infant mortality averages 87 deaths per thousand of live births as compared with 28 per thousand in the United States.

Malnutrition and preventable infectious and parasitic diseases are responsible for most illnesses and deaths in Latin America. The most severe health and sanitation problems are found in rural areas, but cities are also plagued by malnutrition and such diseases as tuberculosis, diarrhea, and enteritis. The principal specific diseases in rural areas include these as well as malaria, hookworm, and, in some areas, yaws and Hansen's Disease (leprosy). The attack on these problems and on industrial hazards has been intensified in recent years by improving and expanding public health services in many countries, by increasing hospital facilities, and by increasing the number of nursing and medical schools. However, much still needs to be done.

At least for some years to come, birth rates are expected to decline less rapidly than death rates. This means that children will continue to constitute a large proportion of the population. For all of Latin America, approximately 40 percent of the population is less than 15 years of age, compared with about 27 percent in the United States. These youngsters are able to contribute little to production, but they require food, clothing, and shelter. And they need better homes, better medical care, and more opportunities for education and training than are now available to the large majority of them.

Any marked increase in the living standards of the rapidly growing Latin American population will require rapid development on many fronts. New land will have to be brought into cultivation and yields increased greatly on land already under the plow. New industries of many kinds will need to be developed, and existing ones expanded. Urbanization will need to be accelerated. Many more schools, urban and rural, will be needed. Housing, sanitary and health facilities, and all auxiliary institutions, will need to be expanded, as will governmental services generally.

Physical Factors

The prospect for achieving economic development and cultural change is significantly affected by Latin America's physical resources and the difficulties of transportation and communications.

Latin America has reserves of physical resources with which to build, but for the size of the region they are relatively limited or unexplored. Much potentially productive land is not being used. There are numerous large mineral deposits, but many Latin American countries are notably deficient in sources of energy. There are vast forests, but most of them are of mixed species, and the proportion of soft woods is low.

Transport and communications are difficult in Latin America. With the exception of the southeast, in southern Brazil, Uruguay, and Argentina, it is only along the coasts and on the Amazon River system that transportation is easy over large areas. The mountainous terrain of the western part of the continent makes transportation costly. Even in Brazil, where few mountains have to be negotiated, not many railways have been built, chiefly because up until recently the ties of the flourishing regions along the coast were more with Europe than

with the inland parts of the back country. More and better highways are needed in all of the countries, as illustrated by the fact that Latin America has only 86 road miles for each 1,000 square miles compared with 1,123 road miles in the United States. Only two or three Latin American countries have good networks of transportation.

The great importance of air transport in Latin America today is a measure both of the terrain's barriers to land transport and of how recently most parts of Latin America were virtually isolated from the outside world and from each other. Before the advent of air transportation, many inland cities were days rather than hours from the coast. The only surface transportation available from Guayaquil on the coast to Quito, the capital of Ecuador, is a single-track railway on which service is often disrupted by landslides or wash-outs, and over a recently constructed highway. Today, the trip over the Andean range, which on land takes 24 hours, can be made by air in one hour. La Paz, the capital of Bolivia, with an elevation of 13,000 feet, has been getting its meat by air, flown up daily from the plains of the Amazon.

It is easy to forget what a different pattern of land use and settlement would have grown up in the United States had not the terrain made railways feasible soon after the settlement of the Mississippi Valley began. Without easy railway access to the rivers and the sea, the Middle West may have had a pattern of small subsistence farming instead of farms producing for markets. The lack of transport in Latin America has preserved ancient and isolated patterns of living. These might have changed long ago had there been greater ease of movement.

THE CHANGING SCENE

GREAT CHANGES are taking place in Latin America. In the past, most of the achievements were made and felt by a relatively small, highly educated layer of Latin Americans. Below this thin surface were the masses of the population for which traditionally unchanging agriculture and handicraft industries continued to yield meager livings. Changes are still initiated more often by the educated, propertied, and governing classes than by the underprivileged. But a middle class is emerging, and with progress in economic and social development, the sharp lines between classes and attitudes have begun to blur. Latin American countries understandably want

to preserve their cultures, but increasingly their cultures are coming to include the desire to distribute opportunity more broadly, to raise levels of living, and to use modern technology.

Technical cooperation programs have grown in the context of economic development and cultural change in Latin America. These changes are being accelerated by technical cooperation but technical cooperation did not initiate them. The U.S. director of one of the more successful technical cooperation programs said to a member of our Project:

> *Latin America is changing* rapidly and dramatically from within. Were it not for this spirit and ferment, our technical cooperation program would not be succeeding.

The desire for change, for economic growth and healthy social adjustments, is creating the kind of environment in which technical cooperation can make constructive, far-reaching contributions to Latin America's future.

III.

The Nature of Technical Cooperation

PEOPLE OF THE FREE NATIONS share the hope that ways can be found to enhance human dignity and to enable them to live together understandingly and without recourse to war. This hope rests on the basic belief that the spiritual and material conditions of men are interdependent and that nations working together can create a world where all people have enough to eat, the ability to read, a healthful environment, a measure of personal freedom, and a voice in the governing of their societies.

Technical cooperation is one among many activities by which to pursue these long-range objectives. In an earlier report, *Sowing the Seeds of Progress*, we described technical cooperation this way:

> *The sharing of scientific and technical knowledge and skills among peoples—helping each other adapt and use such knowledge and skills to achieve greater productivity and better utilization of resources, increase incomes, and raise levels of living.*

Technical cooperation has several distinctive features which increase its appeal to peoples throughout the world.

First, technical cooperation requires intimate working relationships between people of different countries in putting ideas, knowledge, and skills into practice. This is an important step in expanding a community of friendly nations. It provides a two-way street from which all participants reap benefits—whether the program is a government-to-government activity, a relationship between an international agency and a government, or between a private organization and a government, or two private organizations, or some combination of these.

Second, technical cooperation is a flexible tool, easily adapted to serve the long-range objectives of economic and social developmental programs. Through helping to train technicians and administrators, demonstrating ways to improve health, education, agriculture, management, labor, and many other practices, it also helps build the will and power of a people to be free and independent.

It is important that technical cooperation be clearly distinguished

from economic aid or developmental assistance in the form of private investment or public loans or grants, and from grants of armament and other forms of military assistance. However, technical cooperation usually increases the effectiveness of economic aid, and frequently accompanies it. On the other hand, military assistance—though an important phase of the cold war—seldom has a direct relationship to technical cooperation programs.

The effects of formal or intergovernmental technical cooperation programs, in the transfer of techniques from one country to another, are akin to such transfers within the normal course of trade and investment. However, the international transfer of techniques is an incidental by-product of business operations carried on in pursuit of profit, while the transfer and adaptation of techniques are the primary task of programs of technical cooperation. They reach, in the main, different people and thus are complementary. Technical cooperation programs, however, are often a spur to international trade and investment. By accelerating industrial development, increasing the production of food and raw materials, improving productivity, and enhancing purchasing power, technical cooperation may help cooperating countries produce larger amounts of goods and services, some of which they will want to export. It also increases their ability to purchase imports as well as more domestic goods.

Unique Characteristics Of Technical Cooperation

The key word in "technical cooperation"—whether public or private—is "cooperation." Too frequently the necessity for cooperation has been ignored. Some programs are "in host countries but not of them," with foreign technicians seeming to cherish their separateness. At other times the host government is at fault, expecting foreign technicians to come, do a job without help, and leave. It is only when the distinctive contributions of each partner are recognized, and true cooperation achieved, that technical cooperation is effective.

The value of technical cooperation goes far beyond the fact that men and women of two or more nationalities work together on common projects, and the fact that funds for the programs come from a foreign and a domestic source. Each country has a distinctive contribution to make and the benefits flow to both. The foreign technician may have more technical knowledge and a detached point of

view but the national technician knows local conditions and probable obstacles. One field administrator told a member of our Project:

> The success of our program rests on the skill of the local technicians, but without the foreign technicians they would not have developed the necessary skill.

It is sometimes supposed that the whole task of programs of technical cooperation is to transfer specific techniques of one country without any alteration to another. The task is more complex than that. Many techniques, successful in one country, are not what people need in another country. Furthermore, it is one thing for a few people in a country to be in possession of a new technique, but it is quite another to create the professional and social environment within which that technique can be widely disseminated and used.

Many methods are good precisely because they are well adapted to local conditions. But, for example, if dairy cattle which produce well in the northern part of the United States fail to stand up in a tropical climate, what then? While there are many cases in which a method or an implement can be profitably transferred from one country to another there are many more cases in which the technique which is needed is that of solving problems. To help people learn to help themselves is the best contribution of all.

Deciding on a technique which may be useful in a country is only the first of a number of steps which must be taken if productivity and levels of living are to be appreciably affected. Consider, for example, the elements which have to go into building up a program of agricultural research in a particular country. There must be an adequate number of qualified research workers. There must be a willingness on the part of government to support such research. There must be, within that program, a personnel policy which assures research workers adequate salaries and security of tenure. The administrative practices within the research organization must be such that they provide adequate freedom to experiment and a timely flow of work materials. There must be sufficient public awareness of the value of research that the program will continue to be supported, and that its findings will be disseminated and put into practice.

At present, there is not a single country in Latin America where even a majority of these elements are present. However, there is evidence that programs of technical cooperation have proved effective not just in training workers but also in improving the situation with respect to each of these other elements. The programs can demon-

strate effective organization of research. They can build public awareness of its value. They can provide an atmosphere in which local technicians can work effectively. A U. S. technician in a successful program of technical cooperation put it this way:

> When we came here we thought we should stay only until we had trained technicians in our specialized tasks. Now we realize that we must remain until domestic institutions are ready to provide the continuation of this program after we have gone.

In another country, the Minister of Agriculture, after speaking critically of certain phases of the cooperative program, was asked if it would not be better to end it. He replied:

> Oh no! I need it. In it, I can get things done I could never achieve in other agencies of my ministry. It has established much better procedures, which I am copying slowly, but I cannot adopt them rapidly without upsetting the other ministries.

Successful programs of technical cooperation do not stop with training a few isolated individuals, or with giving brief verbal or written reports. Rather, they assist in developing continuing programs which can be carried forward by nationals of the host country. For example, little of a lasting nature results from a program which, while worthwhile in itself, gives medical treatment to a few thousand persons, compared with what can be achieved through cooperating in developing a public health service or a modern program of medical education.

The combination of numerous examples of economic and social development together with widespread, persisting poverty in Latin America poses two kinds of tasks for technical cooperation. The more usual need is to accelerate development which is already underway, rather than to initiate it. However, in each country, there is also the problem of getting some sectors of the economy moving which, controlled by tradition, are still relatively static. Programs of technical cooperation often have been represented as pump-priming, as though the task were always to get an activity started from a stationary position, and as though the only validity of technical cooperation were right at the beginning of economic development. This is a misconception. It has led many people to suppose that, because technical cooperation deals with primitive economies, even the simplest change will quickly bring large results. Many technicians appointed to posts in Latin America have been surprised and baffled to discover that the

problems with which they have to deal are fully as complex as those at home.

Where development is moving rapidly, change, obsolescence, and innovation are already common experience; the role of technical cooperation is to provide the techniques and knowledge needed to speed up that movement. But where the same pattern of production has persisted for many years, the whole way of thinking of the people is adjusted to changelessness. Here the problem is technical to the extent that improved practices in which there is virtually no danger of failure must be demonstrated and approved. But the bigger and more delicate task is cultural and psychological: to help people achieve confidence and willingness to risk change. It takes a different kind of person to live in a changing world.

The Relation of Technical Cooperation To Trade and Investment

There are good reasons why each time a major inter-American conference relating to development is held Latin American countries may be expected to ask for greater and more stable markets for their export products and more international investment, and that they will hold these to be more important than programs of technical cooperation. However, technical cooperation is an effective instrument for improving the climate for both. Technical cooperation makes contributions to economic development which are beyond the reach of trade and investment.

The countries of Latin America depend heavily on foreign trade. Some of them are unusually dependent on a market for a single commodity. This is true of Bolivia with respect to tin. It is true of Brazil and Colombia with respect to coffee; Cuba's sugar; bananas in Honduras; and oil in Venezuela. Moreover, no Latin American country is anywhere near to being a self-contained economy in the sense that it produces most of the equipment which it needs for economic development. All of them have to import machine tools, automobiles, and tractors; nearly all must import steel and chemicals; many must import almost all of the manufactured goods they wish to consume or use in production. Other countries, in turn, depend heavily on Latin America, both for sales to Latin American customers and for imports of Latin American products.

Every Latin American country needs foreign capital. This need persists, even in such countries as Mexico which have impressive

records of domestic capital formation and of public investments in roads, irrigation, and power. Part of the capital is needed for manufacturing plants—to provide employment for members of the steadily increasing labor force, to absorb some of the present supply of agricultural labor, and to aid in diversifying the national economy. Part of the capital is needed for roads and railways; part for power; some for irrigation; much for schools, hospitals, housing, and social investments of many types. Some of these are the type of needs which should attract private investors; others are needs which probably can only be met through the Export-Import Bank and the International Bank for Reconstruction and Development (World Bank). In a few countries, some probably cannot be met by foreign capital at all on a loan or investment basis. While there was a time when political conditions in many Latin American countries greatly discouraged international investments, conditions for foreign capital are improving in most parts of Latin America, although there are still obstacles. Latin America needs capital, and no amount of technical cooperation can ever substitute for such capital.

An aspect of international trade and investment which is often overlooked or underrated is the considerable effect which they have in the transfer of technology. In all sectors of the Latin American economy, U. S. business firms are making impressive contributions to technological improvement and economic growth. They are active in agriculture, mining and petroleum, manufacturing, transportation, commerce, communications, finance, and public utilities. Their purpose is to gain a competitive return on an investment of capital and effort, and their daily operations are directed to that end. Technical cooperation is not their principal objective, but rather a by-product of their business operations. Nevertheless, they are serving as important channels through which useful knowledge flows to and from the United States and Latin America. They also are undertaking educational, health, and welfare, as well as training programs, in many Latin American countries. We, therefore, have studied relevant business activities along with those of other private programs of technical cooperation.

Since Latin America needs trade and investment, and normal business operations result in substantial international transfers of technology, why are these activities not sufficient? Where does the need arise for governmental programs of technical cooperation? Or for those of nonprofit private organizations? It arises in connection with those needs requiring programs for which the costs are specific but

the benefits diffused. This is true, for example, of public roads, health, education, agricultural extension, much of industrial education, and public administration. Moreover, the need for transferring technical knowledge to Latin America is so great that it must flow through both public and private channels. Even in the field of industrial development, technical cooperation programs are needed to complement the transfer of techniques in the normal course of trade and investment.

Along with other factors, increasing productivity depends on the health and general education of labor. Small factories are humming in hundreds of towns of Latin America today where 20 years ago many of the people were weakened by endemic malaria. When one inquires into the reasons for this, repeatedly one gets such an answer as: "The Rockefeller Foundation." The Amazon slopes of the Andes in Peru are now capable of supporting a greatly expanded cattle industry, but the region is sparsely populated, and only a few years ago Peruvians were very reluctant to move there because of the lack of medical facilities. Today, the picture has been changed by a bilateral technical cooperation program in health and sanitation. Brazil has timber resources of unknown riches and extent. Commercial forestry will not move in until its profitability can be tested and preliminary surveys have been completed. Meanwhile, the Food and Agriculture Organization (FAO), a specialized agency of the United Nations (UN), goes ahead with demonstrations of logging operations, 2,000 miles up the Amazon near the Peruvian border.

In these fields, quite as much as in industrial technology, there are great gains to be made by cooperation between domestic institutions and trained personnel from countries where the techniques and institutions are more advanced. Trade and investment are self-supporting carriers of improved techniques; programs of health and education are never self-supporting.

Even within the production process, some important sectors of technology are not touched by trade and investment. In agriculture, for example, only to a minor extent do business firms support research in Latin America, and the domestic governmental programs are grossly inadequate. In Latin American agriculture, with hundreds of thousands of independent producers, an efficient program of agricultural extension to demonstrate and disseminate information about improved practices is an integral part of the production process. Yet, this cannot be a profitable private business. Programs providing supervised credit can effectively draw one large class of farmers into

increasing productivity. Yet to put interest rates so high that the programs *could* be self-supporting from the outset would defeat the purpose for which supervised credit is undertaken.

The desperate need of tens of millions of people for higher levels of living exists alongside resources of the wealthier nations. Some of these resources could be of substantial help, but can only be used through the research and educational activities of nonprofit public and private programs.

METHODS OF OPERATION IN TECHNICAL COOPERATION

IT IS NOT EASY to devise machinery that will stimulate the use of new technology, train technicians and administrators, and make institutional improvements in the many functional fields which need to be served. The difficulty is enhanced by the fact that some of the participants in technical cooperation programs are national governments, some are international agencies, and others are private groups. Each has different operating procedures and different purposes. Some of the more typical methods are evaluated here. Their strengths and weaknesses are examined to ascertain which methods are most likely to accelerate the wide adoption of new skills and techniques in the host country.

The Servicio

The servicio is a device which has been especially developed for the joint planning and administration of technical cooperation programs. This special type of agency, which is created by the government of the host country, has been used mainly in the U. S. bilateral programs, but a servicio, or some variation of it, has also been used in the cooperative programs of at least two of the philanthropic organizations. Neither the UN and its specialized agencies nor the Organization of American States (OAS) has yet used servicios in its Latin American programs.

The usefulness of a servicio depends largely upon the scope of the program, the field of operations, and the pattern of governmental structure and administration in the host country. In 1955, there were 49 bilateral servicios in Latin America. (Breakdown by country and purpose in Appendix Table 40.) The great majority of the servicios operate either agriculture, health, or education programs. So far, none has been used for public administration programs, and there

are many small or short-term programs which have not warranted the use of the servicio.

Different arrangements are found in the servicios, because of variations in local institutions, the purposes to be served, and the personalities of the officials of the host government and foreign technicians. However, it is possible to describe the way servicios usually have been organized and operated jointly by the U. S. and host governments.

The servicio is initiated by the execution of a formal agreement between the United States and the host government on a technical cooperation program in a particular field. The host government agrees to establish a servicio as part of its appropriate ministry. The servicio acts as a special bureau of the ministry, but is semiautonomous and has the power to establish its own administrative procedures, including the employment and dismissal of its own staff. The chief of the U. S. technical mission for the particular program usually is director of the servicio (but sometimes he is codirector). In that capacity he is answerable to the host minister, but as chief of the technical mission, he is also responsible to his superiors in the U. S. government.

The servicio is jointly financed by the host country and the U. S. government, either of which can withdraw from the arrangement under specified conditions. This joint financing assures a mutual voice on how the money shall be spent. But as the servicio's work progresses, the contributions of the host country usually have increased in relation to those of the U. S. government. The staff of a servicio usually includes several members of the appropriate U. S. technical mission, but the bulk of its personnel consists of nationals of the host country.

Essential to an understanding of the servicio is the recognition that it is an organizational form; it is not a program. While some servicios operate single projects, most of them carry on simultaneously a number of projects in a broad field—either health, agriculture, education, industry, or others. New projects can be initiated, and old ones transferred to other agencies of the host government, or dropped, at any time, by mutual consent. Failure to understand that it is essentially a device for joint action often leads to the mistaken question: "When will the local government be ready to take over the servicio and run it?" The hope is that the host government can take over and operate individual projects developed by servicios while preserving the servicio as an operating device which can respond quickly to emerging

needs for new technical cooperation projects in its particular field. As one chief of technical mission expressed it:

> A servicio is a not a program. It is like a flatcar onto which a specific project can be loaded and carried to the point at which it can be transferred entirely to a wholly domestic agency of the host government. This flatcar can carry a number of projects simultaneously, unloading each at its appropriate destination, and taking on new projects.

One of the strongest points of a well-administered servicio is the fact that foreign technicians assist their hosts by working with them daily, over a long period of time, in the same organization on completely shared tasks. The servicio is a training ground for Latin American administrators and technicians. At the same time, the work of the visiting technicians becomes more effective as they gain a deeper insight into the problems and customs of the host country through daily and intimate contact with its nationals.

On the other hand, there are weak points in the use of this device. There have been cases where this semiautonomous mechanism has encouraged foreign technicians and administrators to dominate the programs, to by-pass and compete with the ministry of which it is a part, and to withhold too long the transfer of successful joint projects to the appropriate domestic agency. And sometimes the host country's minister prolongs operations of projects by a servicio after they should have been transferred, because of the protection to the project afforded by its semiautonomous status.

The servicio is an effective method of operation for many, but not all, technical cooperation programs in Latin America. The strengths of the servicios are greater than their weaknesses, and the pitfalls can be avoided, if they are clearly recognized by the foreign officials and those of the host governments. The semiautonomous nature of the servicio allows creative administrative innovation, and permits the demonstration of new and improved procedures. The tendency toward foreign domination of servicios can be avoided by special efforts to draw the host minister and his staff into full and active participation at all stages in the operation. Not only does such participation assure a cooperative operation, but also it results in the introduction of better procedures throughout the parent ministry. The contractual and semiautonomous status of the servicio offers the advantage of continuity and stability. It can continue work on a stable basis even when there are frequent changes in other parts of the host government and in the policies of the U. S. agencies.

Hundreds of projects initiated by the servicios have been transferred from servicios to parent ministries, but it seems clear that many transfers have been too long postponed. It is not always easy, however, to determine just when the proper stage for shifting a project is reached. The continuing goal is to transfer projects when they are in full operation and when enough nationals have received the basic training necessary to operate them—even if in some cases the servicio must keep in touch and provide advice for a while.

The Operating Mission

For some purposes, the operating mission is more appropriate than the more formal servicio, and it is effectively used for a variety of programs in Latin America. An operating mission—in any one of several fields—helps officials of the host government in expanding or initiating a program which is to be continued by that government. An operating mission, for example, may help extend public health services or help set up a program of agricultural research. The minister of the host government retains complete administrative authority and direction over the program, but the foreign mission works continuously with him and his staff in getting the program started. Thus, like the servicio, the operating mission is a joint activity.

A difference between the operating mission and the servicio lies in the fact that the former is a more flexible device, which is especially well adapted to many short-term operations involved in bilateral programs. It is particularly suited to specialized tasks where the host government is attempting to expand a substantial program of its own and has a going organization which can readily take on new functions. There is thus little tendency for such a mission to become a foreign-dominated operation. On the other hand, the operating mission has less weight than the servicio in the host government's decisions concerning financial contributions, the continuity of programs, and the adoption of new administrative procedures.

The Advisory Mission

Unlike operating missions, the advisory mission only counsels and instructs officials of a host government or other entity on a stipulated set of problems in a particular field. It has no part in helping to put recommendations into effect. Advisory missions can make a real contribution when they are called in to consult on a specific problem in an

over-all program which the host government otherwise is carrying forward competently. Even under such circumstances, there is some danger that the advisory mission will make its recommendations without sufficiently close relations to the officials of the host government. Entirely too frequently, an adviser appointed at the request of a host government arrives to find inadequate local arrangements for his work. Sometimes no competent representative of the host government is assigned to work with him. Sometimes facilities for travel have not been arranged. Sometimes the official or agency to be advised is not enthusiastic about, or prepared for, an adviser. Too often, advisory missions have worked for a short period on a report, which they have left to be interpreted and put into effect by officials who have had little contact with the mission.

The U. S. programs, constantly seeking more mutuality of operations, have used fewer advisory than operating missions, and the trend is away from them. The OAS is using this device successfully, through the provision of regional technicians for short-term consultative visits to member countries. Advisory missions are still widely used by the UN and its specialized agencies, although there has been a decreasing reliance on purely advisory missions, and a growing tendency for advisers to take on operating responsibilities. The value of an advisory mission is increased considerably if it remains to help in carrying out its recommendations.

University Contracts

One of the newest instruments used in technical cooperation is the university contract. By the end of 1955, U. S. universities had 25 contracts in force in Latin America. (Summarized in Appendix Table 31.) We presented our views on such contracts in an earlier report, *The Role of Universities in Technical Cooperation*. At that time, we called attention to significant differences between two forms of university contract now being used.

Under one contractual arrangement, a university renders professional services in a segment of a program jointly administered by the U. S. and host governments. The university personnel are directed and supervised by the U. S. or host government. This form of university contract is most suitable when the project is uniquely related to the university's activities in the United States. In the majority of cases, however, such contracts can be made with other qualified specialists to avoid draining scarce talent from the U. S. universities.

A greater contribution to the goals of technical cooperation can

be made through the second form of contract—university-to-university cooperation. Under this more promising type of arrangement, bilateral funds finance a program in which a U. S. university cooperates with a Latin American university in developing training and research centers adequate to serve the needs of the host country.

Although strong in other forms of assistance to higher education, neither the UN nor OAS has tried the device of university-to-university contracts.

Many Latin Americans agree that most of the training for leadership to improve technology and to advance economic development should be done in the universities of their own countries. Training can reach more students in local universities than through scholarships for foreign study. Much of the research designed to yield results directly applicable to local problems and conditions should be carried on there. Ways of transmitting accumulated knowledge to the people and translating it into action should be developed at local institutions. They recognize, however, that most of the universities in Latin America are not yet organized to undertake such training and research. There has been a growing awareness of the importance of such activities as more of the long-established academic centers have come to realize the opportunity and challenge for greater service. Their aim is to acquire well-trained personnel, research facilities, and libraries, which are now in short supply but urgently needed.

Many U. S. universities feel that they have a public duty to advise and work with their counterparts in Latin America and other countries—and they are ready and willing to do so if the necessary funds are made available. In turn, the U. S. universities benefit in many ways. Those who take part in the programs learn at first hand much about the host countries in which they work—about the characteristics and customs of the people, the organization and administration of the government, and the institutions with which they are cooperating. In addition, the university in the host country may have technical knowledge useful in the United States, or research carried on cooperatively in the host country may yield results which can be applied in the United States.

Other Private Contracts

Increasing use is being made in the joint bilateral operations of contracts with private organizations to perform specific services in a wide variety of fields. Experience shows that private concerns, for a fee, have performed well in a number of programs—ranging from

planning a railway system to administering rural credit and community development programs. They have undertaken such assignments as training mechanics, organizing training centers, making surveys, mapping, and other specialized work. These private contracts draw into the program skilled personnel who may not be available for regular government employment. Sometimes, the representatives of private concerns and groups are more readily accepted in the host country than government employees, because there is less implication that another government may be attempting to impose its views on a sovereign people. Also, the reputation and prestige of particular organizations have a bearing on the cooperation forthcoming from host personnel.

Training Nationals

Emphasis on training nationals of host countries is a characteristic of all public and private technical cooperation programs. A number of special devices have been developed. The most widely used of these is the provision of a fellowship or grant to nationals for special study and observation abroad. Pending establishment of more types of specialized university instruction and training centers in Latin America, it is likely that both public and private technical cooperation programs will continue to rely heavily on trainee programs for technicians, teachers, administrators, and government officials.

The foundations for many years have made such fellowships an integral part of their programs in Latin America, and business firms operating in Latin America are increasingly offering fellowships for study and observation abroad. A substantial part of the UN program budget is devoted to such grants; in 1954, the UN and its specialized agencies appointed 344 Latin Americans to fellowships or scholarships. (See Appendix Table 1.) From 1941 through 1954, more than 7,000 nationals of Latin American countries have received grants from the bilateral funds of U. S. and host countries for training. Most of them received training in the United States, but some received grants for training within Latin America. In 1954, there were 954 nationals in such training programs. (See Appendix Tables 1, 28, and 30.)

The specific objective is to prepare trainees for professional services in technical cooperation or other developmental programs of the host countries, rather than to provide academic training as such. For example, trainees who come to the United States under the bilateral programs usually are not enrolled in regular graduate or undergraduate university courses, although a trainee's program may include such

courses if they fit his particular needs. Sometimes courses in specific subjects are organized and conducted especially for them—for example, the operation and maintenance of diesel engines or teaching methods in rural elementary schools. In some cases, off-campus study and observation tours are provided—for example, to observe the work of county and home demonstration agents in the agricultural Extension Service. Again, a single trainee may participate in an on-going research project. Many do not go to the universities for their training. Those interested in health and sanitation may study and observe the work at a hospital or a state or federal public health center; those interested in public administration may study and observe in a department of the federal or a state government. An irrigation trainee may spend his time at a field office of the Bureau of Reclamation. Some are trained in commercial concerns and private industry.

Efforts to help meet the need for more specialized training inside Latin America are being made by UN and OAS as well as through the university-to-university programs supported by the U. S. and host countries. The OAS has confined its program, with minor exceptions, to the establishment and operation of regional training centers in Latin America. These provide training for Latin Americans—usually in their native languages—in a familiar cultural and social environment. During 1954, almost 1,000 students were attending the various OAS training centers in Latin America. (Appendix Table 1.) The UN has set up and operates permanent training centers in cooperation with a country or group of Latin American countries.

Other devices include in-service, day-by-day training of teachers, agricultural extension agents, health workers, government workers, and technicians and other employees in business firms and nonprofit organizations; visiting professors, seminars, workshops, and conferences; and the provision of an increasing number of publications on technical problems designed to serve development needs.

The Latin American countries are determined to achieve, by one route or another, economic development and better standards of living. Technical cooperation—public and private—is democracy's route for expediting in these countries economic growth accompanied by social improvement and political independence. At the same time, higher standards of international behavior can be achieved as the people and

governments of all cooperating countries learn more about each other's motivations and the underlying reasons for different approaches to common problems.

In seeking these goals, a number of different methods of working together have been developed and tried in public and private technical cooperation programs. By trial and error, the weak and strong points of various devices have been tested and the most effective ways to a particular end have begun to emerge. Administrators of both public and private programs can now select with greater confidence the particular device which will yield the greatest returns.

IV.

Programs of Technical Cooperation in Latin America

NOTHING REVEALS more graphically the small size of the aggregate technical cooperation program in Latin America than the dollar expenditures and the number of foreign technicians working there.

During 1954, the United States contributed to the bilateral programs in Latin America a little over $22 million; the United Nations (UN) and its specialized agencies spent almost $4 million; and the Organization of American States (OAS) obligated almost $1.75 million. (All figures given for the United States are for fiscal years; those for OAS and UN are for calendar years.) There were, in the same year, 664 U. S. technicians and 379 UN experts engaged in technical cooperation work in Latin America. (See Appendix Table 1. Also, for more details on U. S. technicians, see Tables 27 and 29.)

In addition to their programs in the separate Latin American republics and territories (See Appendix Table 22), both the United States and the UN have regional programs in various fields of activity. In 1954, each contributed to these programs, which serve more than one Latin American country, a little more than $1 million. (See Appendix Table 23.) The OAS, which concentrates on regional training centers, in 1955, had a staff of a little more than 100 full-time technicians in Latin America.

The Latin American countries have been increasing their direct contributions to technical cooperation programs. By 1953, they were spending more than twice as much as the United States and the UN. In 1954, they spent on the bilateral programs more than $46 million and on the UN programs about $7 million. In addition to these amounts, there have been other Latin American expenditures which are on the border line of technical cooperation, but are hard to measure accurately. Many Latin American countries have extended their own domestic programs in such fields as health, education, and agriculture, and some have organized new ministries to deal with these subjects.

Equally difficult to measure in money terms is the technical assistance accompanying loans made to Latin American countries by the International Bank for Reconstruction and Development (World Bank) and the Export-Import Bank. This valuable aid is paid for out of the banks' regular operating funds rather than from funds allocated for technical cooperation by the UN and United States.

The far-reaching technical assistance activities of such private groups as the foundations, religious bodies, business concerns, and labor unions can best be measured by a description of what they are doing, since there is less adequate data than from the public agencies to show actual expenditures. From a study of the technical assistance activities of religious groups, a member of our Project estimates that these U. S. religious groups are spending something like \$8 to \$10 million a year on technical assistance activities in Latin America. Similarly, any estimate of the expenditures of foundations and other philanthropic groups can be only a general approximation. An examination of the reports of a few of those that are active in Latin America indicates a total figure for technical assistance activities in Latin America of something like \$1.5 to \$2 million in 1954. Because of the wide variations among business concerns and the fact that their technical assistance activities are not recorded as such, any attempt to estimate expenditures from this significant source would be unrealistic.

The initial impetus for UN and U. S. programs of technical cooperation must come from the host governments. Not only must a request from them precede program agreements, but they also must agree to share the expense of the programs. The OAS, on the other hand, initiates its own programs, although they are formulated only after consultation with interested governments. The forms of agreements and the financing of private groups vary widely—ranging all the way from outright grants with no administrative responsibility to jointly financed and directed programs.

Since 1950, all of these private and public technical cooperation programs have been expanding, and there has been an intensified effort to organize activities so that they will contribute more quickly and effectively to the long-range goals of social and economic development. Both public agencies and private groups have had difficult problems in recruiting able employees and in planning and administering programs. Even so, they have been moving in the same direction and concentrating on Latin America's most pressing needs. By introducing new ways of doing things in a few programs,

they are helping to stimulate initiative and enterprise in the wider domestic application of technologies and skills.

A summary of the programs of the public agencies and private groups highlights the differences and the similarities in their operations. And it points up the ways in which public and private programs can complement each other without duplication or overlapping of efforts. Work is going forward on a broad front—in health, education, agriculture, public administration, mining, transport, resource development, and others. (See Appendix Table 45 for U. S., UN, and OAS contributions by field of activity.) Cutting across all of these functional fields are the programs for strengthening the Latin American universities and for training Latin American nationals.

The U. S. Bilateral Programs

The first stimulus to bilateral technical cooperation as it is now practiced came in the 1930's when the United States was seeking closer and more effective relationships among the American republics. A second came during World War II, when there was an urgent need to use Latin American resources more effectively. A decade of experience backed up and sharpened the third stimulus—Point 4 of President Truman's inaugural address of 1949, in which he proposed that the United States "make available to peace-loving peoples the benefit of our store of technical knowledge in order to help them realize their aspirations for a better life."

During the 1940's, the United States conducted two independent programs of bilateral technical cooperation in Latin America. One of these was through the Interdepartmental Committee on Scientific and Cultural Organization, started in 1939. This was a loosely organized coordinating committee, made up of representatives of more than 25 bureaus of 18 government departments and agencies, each of which was directly responsible for planning and administering the programs assigned to it by the Committee.

In April 1940, the Office of the Coordinator of Inter-American Affairs was created to "improve cultural and commercial relations" of the United States and other American nations. The initial program of this office emphasized public information, but the need for more active cooperation was soon felt. In 1942, the Coordinator established the Institute for Inter-American Affairs (IIAA), set up as a government corporation, to administer its own technical cooperation programs.

Both the Interdepartmental Committee and the IIAA concentrated mainly on technical assistance in the fields of health, education, and agriculture during the 1940's. Even in its early years, the IIAA stressed cooperation with the individual Latin American countries in setting up jointly planned, jointly financed, and jointly administered programs, rather than the provision of technical advice only.

During the war, a few U. S. troops were stationed in Latin America. Some U. S. workers were located in tropical and jungle areas helping to produce rubber and extract minerals for use in connection with the war. Both health and food programs were undertaken to help meet the needs of the U. S. nationals in Latin America. In addition, IIAA started programs to replace foods formerly imported by Latin American countries for which ocean shipping was not available during the war. A related food program was that of the Office of Foreign Agricultural Relations of the U. S. Department of Agriculture, consisting of research on crops not grown in quantity by the United States or for which abnormal needs existed because of the war. All of these projects served the immediate self-interest of the United States as well as that of the host countries.

In many quarters, at this stage, technical cooperation was looked upon as simply one phase of the war effort. When the war ended, many people in both the legislative and executive branches of the government felt that U. S. participation should be ended. As a result, appropriations for IIAA were reduced from $10.6 million in 1945 to $7.4 million in 1946, reaching a low in 1949 of $4 million. During this period, however, the contributions of the Latin American countries to the bilateral programs steadily increased—from almost $5 million in 1945 to $17 million in 1950. (See Appendix Table 24.)

In June 1950, Congress implemented the Point 4 proposal in the Act for International Development, which authorized technical cooperation programs with all peace-loving peoples "for the international interchange of technical knowledge and skills." The Act made a clear distinction between technical cooperation and large-scale grants or loans for economic and military assistance, and indicated that the United States would cooperate in technical cooperation programs in any field related to the economic development of host countries. Thus, bilateral technical cooperation, as it had evolved through the years with Latin America, was offered to the peoples of underdeveloped areas in other parts of the world. After passage of the Act, appropriations for technical cooperation again increased, and the cooperative programs in Latin America grew in number, in size, and variety.

Organizational and administrative instability hampered the bilateral programs from 1950 to 1955, a period during which there were four major reorganizations. First, in 1950, the Technical Cooperation Administration (TCA), which absorbed the Interdepartmental Committee, was established within the State Department. Then, in 1951, the new Office of the Director for Mutual Security was given authority to coordinate TCA and the two agencies that were administering economic aid and military assistance. Next, in 1953, the Foreign Operations Administration (FOA) replaced Mutual Security and took over TCA's functions. It also was given responsibility for administration of technical cooperation, military assistance, and economic aid. Then, on July 1, 1955, the International Cooperation Administration (ICA) was created, to operate within the State Department as a semiautonomous agency for technical cooperation and economic assistance—but not for military assistance. During all these changes, the IIAA has continued to serve as the operating arm for technical cooperation in Latin America.

The periodic disruption and reconstitution of the administrative pattern have had a demoralizing effect on every major phase of program operations. This has kept the program off balance. It has caused delays in major policy and administrative decisions, and has interfered with the retention of experienced and competent personnel and the recruitment of new staff. And, importantly, it has baffled and confused the foreign governments with which the United States wishes to cooperate. Another problem has been the uncertainty of appropriations from year to year. Although no terminal date was given for technical cooperation, Congress did not include the customary provision authorizing the annual appropriation in future years of whatever amounts Congress decided might be necessary for this purpose. As a result, it is necessary each year for Congress to reauthorize further appropriations as well as to decide how much shall be appropriated.

The need for integration of technical cooperation activities in the host countries became clearer as the size and number of programs increased. In every host country, all U. S. technical cooperation activities in each broad field—agriculture, education, health, industry, etc. —are headed by a chief of technical mission. Each chief of technical mission is fully responsible for supervising all U. S. technical cooperation personnel and for administering all projects which make up the broad program in his field. Until 1951, he dealt directly with Washington on all phases of his operations, and there was no formal coordinating mechanism for the various U. S. technical missions in a

host country. There often was confusion on policies, purposes, and priorities of the different country programs in which the United States was participating. During 1951, the U. S. government began to organize unified country teams. A country director was appointed to coordinate all U. S. technical cooperation activities in the host country and a country program planning committee was established. The results, so far, have been uneven.

The purpose of the country director of technical cooperation is to furnish leadership for all U. S. programs in a host country; not to direct and administer all of the intricate details of the different missions' programs and projects. He is primarily responsible for assuring that all bilateral programs fit into the country's broad program of economic development. At the same time, he is responsible for seeing that the bilateral programs in the host country are being planned and operated in line with the intent of Congress and the broad policy outlined by the ICA.

An important function of the country director is to free chiefs of the technical missions of onerous and time-consuming administrative tasks. His purpose is to carry the major burden for contact with the headquarters office; follow up and expedite attention to requests for additional technicians or necessary materials and equipment. It is to work out budgetary allocations, report on progress in various projects, and take care of administrative housekeeping generally. A country director who is familiar with the host government and its officials and who can provide an operating base with adequate working facilities can smooth the way for all projects and programs, including those of a short-term nature.

The country director has a difficult and delicate human relations job, not only with personnel of the technical missions and the host government, but also with the U.S. embassy and with officials in the Washington headquarters. Some country directors have demonstrated an extraordinary ability in both human relations and professional skills, but this is not uniformly true. A number of political appointments of poorly qualified directors were made after 1952.

Before the country directors were appointed, there was no question that the chief of each technical mission should deal directly with the appropriate minister and his principal assistants in all stages of his program. He had the prestige of being the top U.S. administrator in the country for programs and projects in his particular field. In some instances, the advent of country directors confused and interfered with this subtle and intimate relationship.

The cooperative effort in each broad program is centered in the chief of technical mission. Until 1954, project agreements were planned, negotiated, and signed by him and the appropriate minister in the host country, within the confines of broad provisions contained in formal intergovernmental program agreements. A requirement, introduced by FOA, now makes it impossible to negotiate and sign agreements on projects without prior approval from Washington. As director or codirector of a servicio, many of the chiefs of technical missions share with their corresponding ministers the executive direction of technical cooperation programs.

A major weakness in the administrative structure of bilateral technical cooperation agencies has been the failure to provide adequately for planning new programs. Decisions on each bilateral program and project are affected by the physical, economic, and social facts in each host country. They also must take into account current and proposed programs of the multilateral agencies, the host governments' regular activities and long-range development programs, and the activities of private groups—both nonprofit and profit-making organizations.

Technical cooperation requires an extraordinary amount of patience, judgment, willingness to compromise, and ability to improvise on the part of the U.S. field staff and officials of the host governments. At the planning stage, it is important that the administrative device most suitable for a program be chosen; the timing of particular types of programs be determined; the relative merits of concentrating programs in one area or dispersing them throughout the country be evaluated; methods of providing training opportunities in each program be considered; and ways of acquiring basic data, keeping adequate records, and assuring periodic review of programs be established.

The system of country planning committees, begun during 1951, was designed to facilitate such decisions. The country director is chairman of the committee, which is composed of the chiefs of technical missions. Each technical mission is responsible for developing preliminary plans in its field for submission to the committee. The committee's purpose is to consider the interrelationships of the separate proposals, consult with the proper host officials in deciding what adjustments are necessary, and recommend appropriate budgets for all U.S. technical cooperation activities in the host country.

In some cases, country planning committees have worked reasonably well. In others, there is little evidence that program planning

geared to the host country's over-all needs for long-range development is being seriously pursued. Too often, the U.S. country committees have planned in a vacuum because of ineffective liaison with other technical cooperation activities and related domestic programs.

Over and over, discussions of technical cooperation lead finally to this kind of remark: "After all, success or failure in technical cooperation boils down to the quality of personnel." This, we believe, is a true statement and, under present circumstances, a discouraging one. One of the most serious and continuing problems for bilateral technical cooperation programs has been to find, train, and keep qualified technicians and administrators who will serve abroad. The size and persistence of this problem is in large part a product of organizational instability which has marked the U.S. side of the program.

Considering the many factors which have discouraged entry into this field, it is surprising to discover the number of dedicated administrative and professional employees both in Washington and in the field who have entered the work, stayed with it, and contributed to the success of the bilateral programs. Many of these veterans in a relatively new type of activity have made very real personal sacrifices to continue programs under difficult circumstances. They have been largely responsible for keeping alive the faith in this type of cooperation as a practical means for accelerating economic and social development and better living standards in underdeveloped countries. One reason, we believe, is that they know so well that experience and continuity of service are vital to the success of the programs which they have helped to start.

Outside this core of long-service employees, most of the administrative and professional employees engaged in technical cooperation come and go after short tours of duty. Many who would like to enter the field cannot afford to take a chance on its impermanence. The gap between the supply and the demand for technical cooperation employees is steadily widening and little has been done to close this gap by better personnel policies or improved training programs.

The size of this personnel problem is indicated by the fact that, in every year since 1950, there have been some 300 or more vacancies for Latin America alone. The turnover in posts of leadership has been a particularly disturbing factor in the Latin American bilateral programs. While stressing the importance of good personnel procedures —appointment for merit and continuity of tenure—to Latin American officials, the U.S. programs have been characterized by the instability which they condemn.

There are several reasons for the difficulty of recruiting and retaining sufficient numbers of well-qualified personnel. One of them is the short term of appointments and the lack of assured career opportunities. The personnel recruited for technical cooperation work abroad have not yet been offered the protection of the Civil Service or the Foreign Service systems, or the consolidated career service being established in the State Department. Large numbers go abroad for only two-year tours of duty. Hundreds of people are lost to the program each year at just about the time they are beginning to gain skill in technical cooperation work abroad. This turnover and waste of human resources require an enormous and constant administrative effort to recruit new and untried personnel as new requests are received. The program cannot afford this prolonged waste of effort and good human material. Nor can it hope to recruit promptly enough people of the right quality when it cannot offer the protections and opportunities of a new career. Long delays in the security clearances that are required for prospective technical cooperation employees and the necessity for political clearances, which started in 1953, have further impeded the recruitment of personnel. Sometimes the employee arrives in the host country so late that the official who requested him has left or has lost interest in the mission.

During the early 1950's, health, education, and agriculture continued to receive the greatest amount of attention in the bilateral technical programs, as indicated by the fact that in 1953 and 1954 around 80 percent of U.S. funds for bilateral programs was spent in those fields. However, the programs were spreading to other important fields—public administration, industry, mining and labor, transportation, communications, and power, and community development. There have been bilateral programs in all Latin American countries except Argentina. (See contributions to programs by fields of activity, 1943 through 1955, Appendix Table 25; and descriptive summary of 1955 programs, Tables 32 through 39.)

Health and Sanitation Programs

The biggest bilateral technical cooperation programs in Latin America during the early years, and second largest today, are those in health and sanitation. An account and evaluation of these programs appears in *Ten Years of Cooperative Health Programs in Latin America* (U. S. Public Health Service, Washington, 1953), prepared by a group headed by Dr. Wilton L. Halverson, Director of the California Department of Public Health. We have drawn heavily on that report

as well as on the experience of the Project's research staff and of individual members of this Committee—especially Dr. George K. Strode, who participated in the Public Health Service study.

The first agreement for a bilateral health and sanitation program was made with Ecuador in 1942; by the end of the year programs had been established in 11 Latin American countries. In 1943, U.S. contributions amounted to slightly over $7 million for the health programs in Latin America—more than 80 percent of the U.S. total in that year. During 1944, U.S. contributions of over $10.5 million were made to cooperative health and sanitation programs in 18 countries. In the years immediately following the war when all U.S. contributions declined, expenditures for the health and sanitation programs also were markedly reduced, reaching a low of $2.5 million in 14 countries in 1949. However, this represented more than 60 percent of the total U.S. expenditures for technical cooperation in Latin America. In 1954, the United States contributed almost $4.5 million for bilateral health and sanitation activities in 18 countries. At that time there were 162 U.S. technicians in the Latin American programs, and 129 Latin Americans were being trained in health and sanitation.

Almost all of the health and sanitation programs have been administered by servicios staffed primarily by nationals of the countries. For example, in June 1952, the number of host country nationals employed in the health and sanitation servicios in all countries totaled more than 7,000, working with about 120 U.S. technicians. From 1951 through 1954, funds totaling over $100 million were made available to all bilateral health and sanitation programs, with more than $85 million contributed by Latin American countries. Many projects which were started as cooperative undertakings have been transferred to agencies of the host countries for continued operation with their own funds.

The servicios which plan and administer health programs have varied projects in different countries. However, for all of Latin America, the major categories, listed in the order of their estimated total cost, are: construction and operation of hospitals, health centers, and other medical facilities; environmental sanitation; specific disease control (including malaria control by drainage); training facilities and programs; and strengthening national and local health services.

Some of the hospitals constructed have been in capital cities, like the Roosevelt Hospital in Guatemala City and the Maternity Hospital in Quito, Ecuador. Most of them, however, have been in more remote sections of countries, or in parts of countries of potential

promise but hitherto relatively undeveloped. For example, the health servicio in Peru has built hospitals in towns and small cities east of the Andes, and in Brazil, most of the hospitals built by the bilateral program are in the Amazon Basin.

Hundreds of towns and cities now have water systems and sewage disposal systems designed, and in many cases constructed, by health and sanitation servicios. In practically all cases, these were operated from the outset by local technicians and officials who were trained by the servicios.

In Honduras, for the first time, the government has established a ministry of health. The account of how this was accomplished makes an interesting story. Feeling that a ministry was necessary, the servicio began by establishing, in the capital city, a number of separate clinics, each in a different field of specialization, and each in separate rented quarters wherever these could be found. Personnel were trained for these separate clinics, and adequate basic equipment was secured. Meanwhile, a new minister of health was added to the government. It was agreed that the health ministry needed a building of its own, although most other ministries had none. The servicio designed the building. When it was ready, all of the separate clinics were moved into it, and each chief of a clinic was told: "Now your job is to become a department of the ministry to establish similar clinics all over Honduras."

Education Programs

The governments and people of Latin America are well aware of the need for more and better primary and secondary schools, for vocational and technical training, and for strengthening their institutions for training leaders in the fields of education, medical sciences, agriculture, administration, engineering, and other social and physical sciences. Technical cooperation and assistance—both public and private—are welcome.

When the Interdepartmental Committee was organized, the U.S. Office of Education supplied technical assistance to the Latin American republics through a fellowship program for the training of teachers in the United States, short-term consultation services in the countries requesting assistance, and through surveying the educational systems of 14 of the Latin American republics. This program continued until the Interdepartmental Committee was discontinued. Meanwhile, educational programs were also being undertaken by the Inter-American

Education Foundation, a government corporation set up in 1943, which in 1947 became the Education Division of the IIAA.

From the point of view of financial contributions, the bilateral education programs have been relatively small. The programs had grown sufficiently so that in 1954, the U.S. contribution to programs in 13 countries was almost $2.4 million and that of the host countries approached $3 million. During that year, 83 U.S. technicians were serving in the programs and there were 45 Latin American trainees. In 1955, U.S. funds were allocated for bilateral education activities in 16 countries, and the programs in 11 republics were operated by servicios.

In countries where literacy is low and where elementary school facilities are inadequate, the extension and improvement of education at the lower levels is of basic importance. Whereas adult education in literacy and in community living is also important, the programs of IIAA in education have been devoted mainly to elementary, industrial, and vocational education. They have emphasized teacher training in all of these activities.

In Bolivia and Peru, bilateral programs have cooperated in the development of a "nuclear" system of schools. This system includes rural schools for the lower grades which are coordinated with central schools for the higher grades, where supervisors are based. In Bolivia, this program began in some areas by organizing rural schools into 18 nuclei, or clusters, of elementary schools. A central school in each nucleus provided four grades of elementary education and supervised the work of 15 to 20 sectional schools of one or two grades each. The cooperative rural education program operates four nuclei in which improved teaching methods are demonstrated. The aim is to extend them gradually to all of the rural schools under the Ministry of Indian Affairs. The cooperative educational program also operates the Warisata Rural Normal School. This has a demonstration elementary school, for the improvement of the future rural teachers and conducts intensive short courses for in-service training of the nuclear school teachers and supervisors. In addition to the rural education activities, the cooperative program has assisted the Bolivian government, since 1947, in the training of skilled industrial workers, through the Pedro Domingo Murillo National Industrial School at La Paz and industrial sections attached to secondary schools in the capitals of each department or state.

In the Dominican Republic, in Brazil, El Salvador, Honduras, and Panama, among others, industrial schools have been started and developed.

In Mexico, the University of Michigan is cooperating in an operators and mechanics school; Teachers College of Columbia University is cooperating in a survey of technical and higher education. In Nicaragua, the University of Florida, under an IIAA contract, is cooperating in the development of curriculum and teaching materials and training of teachers for a trade school. The University of Tampa is cooperating with the Cuban Ministry of Education. In Chile, the bilateral program gave technical counsel to a Chilean commission seeking to revise and reorient the secondary school system of the country. In Peru, the education servicio had a large part in designing and building a new National Normal School at Chosica, near Lima; and since construction of the buildings, several members of the U. S. technical mission have participated as instructors in the school. Also in Peru, the education servicio is helping to establish a new training school for rural teachers at Urubamba in the Andes near Cuzco.

These are only a few of the services performed in the educational programs. They deal with education in crafts and trades, education in better teaching methods, and preparation of instructional materials.

Agriculture Programs

In recent years, U. S. contributions to bilateral programs of technical cooperation have been greater in agriculture than in other fields of activity. In 1954, around 45 percent of all U. S. contributions for bilateral technical cooperation in Latin America were in the field of agriculture and natural resources.

That year, under IIAA programs, U. S. funds amounting to $9.7 million were allocated for agriculture and natural resources programs in 17 Latin American countries. The same year, 281 U. S. technicians were in this field and there were 196 Latin American trainees.

The agriculture programs differ from country to country, reflecting the wide variations in problems encountered. A major emphasis in most countries is helping to develop programs of agricultural extension. In Peru, the agriculture servicio has 37 extension offices. In each office, located in different parts of the country, there is a Peruvian extension agent, following a program similar to that of a county agent in the United States. They demonstrate improved agricultural practices to groups of farmers, organize youth clubs similar to the 4-H clubs of the United States and organize farmers into agricultural committees. This pattern is also being followed in Costa Rica and in Honduras.

The United States began cooperating with Bolivia in a program of agricultural research in 1946. After 1952, cooperation was widened to include agricultural extension; and in 1953, considerable numbers of tractors, heavy plows, and land-clearing equipment were moved in to begin the task of getting the eastern plains into cultivation. By 1954, this bilateral program in agriculture was operating three experimental stations, had trained 24 extension agents, all Bolivians, who were working in about half of Bolivia. That year, the extension service conducted several thousand demonstrations of improved agricultural practices, witnessed by about 94,000 farmers, and organized 70 youth clubs. A similar system is being developed in a part of Paraguay. In Colombia, a single district, Boyaca, has been chosen as a demonstration area, in which the agents of the Colombian extension service will be given in-service training once the program is well established. In Chile, agricultural extension is a major phase of a general area development program.

A widely adopted technique in these programs is the sale or rental of machinery and supplies through projects called "reimbursable facilities." There are two phases in such operations. One is the provision, on payment, of the materials necessary to improve agriculture —improved seeds, fertilizers, insecticides, and tools and implements— where they are not readily available through commercial channels. After extension agents demonstrate the value of such materials, a sufficient demand soon develops among farmers to encourage merchants to begin stocking them. The technical cooperation program gradually goes out of business with respect to any materials and equipment which become available through the market.

The other phase of such projects is the operation of machinery pools by servicios. One of the problems of mechanizing agricultural production in many places is the lack of competent servicing and adequate repair parts for tractors and machinery. A servicio can import equipment, then operate it for farmers, on hire, just as many private operators do in the United States. As farmers see the value of equipment demonstrated on their own farms, many of them buy machinery of their own, and as governments see the value of farm mechanization they may make it easier for dealers to get the necessary dollar exchange to import more equipment. The most successful machinery pools are in Peru and Bolivia, but several others are operating efficiently in other countries.

Other agricultural activities frequently undertaken within programs of technical cooperation are the construction or strengthening of ex-

periment stations, the design and construction of irrigation works, well drilling, land clearing, and cooperation with schools and colleges of agriculture. This last has become much more important with the development of university contracts.

There are more ICA-financed university contracts for work in agriculture than in any other field in Latin America. At the end of 1955, nine U. S. universities were cooperating in the bilateral agricultural programs in eight Latin American republics. (Two U. S. institutions—University of Pennsylvania and Texas Agricultural and Mechanical College—had contracted for work in Mexico.) The authorized expenditure of ICA funds under the university contracts for agricultural programs is about $4 million. The first two of the contracts were signed in 1951. Under one, the University of Arkansas agreed to cooperate with the Ministry of Agriculture and the National Institute of Agriculture in Panama in research, teaching, and extension in agriculture and home economics. The other was for cooperation by Michigan State University and the National University of Colombia in teaching and research in the fields of agriculture and natural resources. The other seven contracts were signed in 1954 and 1955. Not all of the contracts provide for direct cooperation with Latin American universities, since in some countries agricultural extension and research are functions of the government ministries rather than the universities.

In addition to the contracts in the Latin American republics, one university—Maryland—has a large ICA contract (an authorized expenditure of $925,000) under which it is advising and assisting British Guiana, Surinam, and Jamaica in the fields of agriculture, engineering, health, housing, and community development. There is no direct cooperation with the universities or colleges in these territories, and many of the activities carried on under the program are not closely related to activities on Maryland's home campus.

Public Administration Programs

There has been a growing awareness in most Latin American countries that improvements in many phases of public administration would accelerate economic and social development. They would like to see improvements in the organization, management, and methods, at all levels, of specific ministries, government corporations, and provincial and municipal agencies, and in the relationship of all these agencies to each other. They are concerned with problems of budgeting; public finance and fiscal administration, including tax administra-

tion, banking, and credit systems; public debt management; tariffs and customs; personnel selection, training, and compensation; procurement and warehousing; and specialized technical functions such as collection and compilation of statistics, coining money, surveying and mapping, and others.

In the early years of the bilateral program, however, neither the United States nor the host governments considered public administration to be a field for technical cooperation. Some host governments did not recognize the shortcomings in their organization and management; some felt that it would be an infringement on their sovereignty for U. S. government employees to cooperate with or assist them in modifying existing organization and practice.

By 1950, these attitudes had changed greatly. Some programs had proved successful in training statisticians—which had not been generally considered as public administration programs. Furthermore, there had been some influence on public administration as a result of the demonstrations of new patterns of organization and management by the servicios and operating missions working on agricultural development, health, and education.

In 1955, U. S. funds were allocated for bilateral public administration activities in all except three Latin American republics. In 1954, there were 46 U. S. technicians in such bilateral programs, with U. S. contributions close to $1 million. During the same year, 148 Latin Americans received grants for study and training in some phase of public administration. The University of Tennessee is cooperating, under an ICA contract, with the University of Andres in Bolivia in developing its curriculum in public administration, and under another contract is cooperating with the government of Panama in its efforts to improve administrative procedures and practices.

Other Programs

Since 1950, bilateral programs have been launched in industry, mining, transportation, labor, and general community development. The allocations of U. S. funds in these fields in 1954 totaled about $2.25 million and 92 U. S. technicians were employed in Latin America. In all of these fields great emphasis was being placed on training nationals of host countries. In 1954, 436 Latin Americans received grants for study and training in one or another of these fields.

In industry and mining, projects were in operation in 1955 in 15 republics. The projects included investigation of mineral resources, improvements in mining methods, surveys of industrial needs and

potentialities, increasing productivity, and improving small industries and manual arts. Most of the U. S. technicians and administrators were serving as consultants and advisers to the host governments, and, in 1954, 119 Latin Americans were receiving training in these fields. Industrial servicios had been established in Chile, Ecuador, and El Salvador to work primarily with small industries.

In transportation, U. S. allocations were made for bilateral activities in 16 countries in 1955, but U. S. expenditures in this field were much smaller than in industry and mining. Only 25 U. S. technicians were engaged in the program in 1954. Most of them were advisers and consultants in aviation, highway construction and maintenance, port development, inland navigation, and related subjects. There were 123 Latin American trainees in this field.

In 1955, projects in the field of labor were in operation in 15 countries. The program in Uruguay began in 1953; in 13 countries they began in 1954; and in one, Honduras, in 1955. Training nationals locally and in the United States in such subjects as labor ministry administration, industrial safety, trade union organization, labor-management relations, and the techniques for improving productivity, was the predominant activity. A servicio has been established in Peru to operate an employment service. In 1954, over 150 Latin Americans from government ministries and trade unions came to the United States for study and observation—most for periods ranging from three to six months. Before arrival in the continental United States, some had participated in special three-month courses in trade union administration at the University of Puerto Rico.

In general community development, bilateral cooperation began in 1953, and in 1955 U. S. funds were allocated for activities in 13 countries. A joint fund agreement had been established in Chile for cooperation in low-cost, self-help housing. In other countries, cooperative activities included advice, surveys, and training in housing, urban development, and various phases of social welfare. There were 11 U. S. technicians in Latin America in 1954, and 35 Latin Americans were being trained in the field of community development.

United Nations Programs

The United Nations Charter pledges the promotion of "higher standards of living, full employment, and conditions of economic and social progress and development." In pursuit of this aim, the UN and its specialized agencies, for several years

before the Point 4 proposal received such wide attention and support, had been providing technical assistance to less developed countries as part of their regular activities.

At about the time that the United States adopted the Act for International Development, the UN launched the Expanded Technical Assistance Program (ETAP). Beginning in July 1950, a special account was set up for financing ETAP and procedures worked out for increasing aid in underdeveloped countries.

Six members of the UN family have the principal responsibility for technical assistance activities. Five are specialized agencies—each of which has additional regular activities carried out under terms of its own charter, and financed separately. These specialized agencies are:

- Food and Agriculture Organization (FAO)
- World Health Organization (WHO)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- International Labor Organization (ILO)
- International Civil Aviation Organization (ICAO)

The United Nations Technical Assistance Administration (UNTAA) is the sixth agency. It was established at UN headquarters to provide assistance in the functional fields which are outside the specialized agencies' scope.

Two additional agencies—the World Meteorological Organization (WMO) and the International Telecommunication Union (ITU)—have a few projects in which they provide technical assistance in their fields, with UNTAA handling most of the administrative work. Another UN body, the United Nations Children's Fund (UNICEF), does not participate directly in ETAP, but it supplements technical assistance programs that are directly promoting the welfare of children by furnishing supplies and equipment which otherwise would not be available. The World Bank and International Monetary Fund, both of them UN affiliates, have a special, but not a direct, relationship with ETAP.

The responsibility for coordinating all technical assistance activities is divided among three UN headquarters organs. The Technical Assistance Board, which includes an executive chairman and members from all participating agencies, has a permanent secretariat and supervises the programs and allocates funds among agencies and fields of activity. It reports to the Technical Assistance Committee

of the UN Economic and Social Council, which contains a representative from each member nation of the Council. This Committee provides general guidance to the Technical Assistance Board and makes policy recommendations to the Council. The third organ—which in 1954 began to extend its authority over the technical assistance program—is the Administrative Committee on Coordination, of which the UN Secretary General is chairman and the heads of all the specialized agencies are members.

Because there is some overlapping in the functions of the UN agencies providing technical assistance, a suitable division of effort often requires the collaboration of two or more of the UN agencies. For example, work in nutrition may involve FAO and WHO, and some help from UNICEF. Programs on rural industries and cooperatives may require collaboration by ILO and FAO; or on occupational health, collaboration by ILO and WHO. Or work in public administration training might involve both UNTAA and UNESCO.

To provide coordination of activities within the host countries, the Technical Assistance Board has adopted the policy of appointing a UN resident technical assistance representative for each of the larger countries and for groups of smaller countries. By the end of 1955, seven UN resident representatives were stationed in Latin America. Five were responsible for all activities in a single country—Bolivia, Brazil, Colombia, Ecuador, and Haiti. The UN resident representative with headquarters in Mexico City, however, was responsible for seven countries; another was responsible for work in Uruguay, Argentina, and Paraguay. Their functions are to coordinate the planning and administration of all ETAP activities in the host country, to serve as the main channel of communication between the Board and the host government, and to advise and help the field personnel of the participating organizations. The UN resident representative, however, has no right to give directions to the participating organizations, or to come between them and the officials of the host government who are concerned with their particular activities.

Although the position of the resident representative has been steadily growing in importance and influence, several problems remain. It has been difficult for the UN to recruit men of sufficient stature and competence for the position. The nature of the assignment makes it difficult for one resident representative to serve adequately in more than one country. The representatives of the specialized agencies, oriented mainly to particular fields, generally have

feared that their programs would suffer from the introduction of a resident representative. While there is increasing evidence that the specialized agencies are finding the residents' administrative services useful, there is still resistance to actual coordination of program planning.

Funds for ETAP are obtained through voluntary contributions of member governments, and thus have fluctuated from year to year. Over 70 member countries pledged a total of more than $25 million to ETAP in 1954, but because of delays in payment of pledges, the amount actually obligated in the worldwide programs that year was only about $19.5 million. Of this, about one-fifth was for programs in Latin American countries and dependent territories—with over half of these funds assigned to FAO and UNTAA. (See Appendix Tables 41 and 42 for UN obligations, by countries, agencies, and fields of activity.) The contributions of the United States to ETAP have been the largest by far, amounting to over 50 percent of the total.

Host governments typically meet part of the local living costs of the UN experts, travel costs within the country, and other internal administrative expenses; pay part of the local costs of fellowships and scholarships; and furnish needed supplies and equipment procurable within the country. Relatively small amounts for equipment and supplies for projects are provided by the UN agencies—mainly because of the limited funds available for technical assistance.

Most UN technical assistance missions have been advisory. Experts are provided, on request by a member country, to counsel with an established government agency on a particular program, but they have few or no operating responsibilities. Increasingly, however, UN experts are being requested to help put the recommended programs into effect. An example is the continuing assistance given by FAO experts on forest policy, saw-milling, logging, and forest inventory in the Amazon Valley in Brazil. The other major type of ETAP assistance is the provision of training courses and fellowships and scholarships.

The technical assistance programs of the UN and its specialized agencies suffer, like those of the United States, from the practice of offering experts only short-term assignments. There is no career service for technicians sent abroad and the procedures for orientation and supervision of such employees are inadequate. The situation in regard to technicians in this work is in striking contrast to the strong career service developed for headquarters personnel.

Health Programs

The primary responsibilities of WHO are to provide aid on communicable disease; public health services and administration; environmental sanitation; health education and training; epidemiology and health statistics; drugs and other pharmaceutical substances. When WHO was established, the Pan American Sanitary Bureau (PASB) of the OAS became the regional office of WHO for Latin America, and PASB is operating, not only the regular programs of WHO in Latin America, but WHO's technical assistance projects in 11 country programs and a regional program, as well as its own regular projects.

The total allotment of ETAP funds for WHO's health programs in Latin America was about $625,000 in 1954. In addition, UNICEF contributed supplies and equipment for some of the projects. The funds were used primarily to send physicians, health engineers, and trained nurses to advise and assist Latin American governments in planning and inaugurating new programs and in expanding and improving existing ones, and for fellowships and scholarships for training abroad.

A total of 55 WHO advisers and consultants served in Latin American countries and possessions in 1954, and 59 Latin American fellows and scholars were appointed. Under its regular program, WHO granted an additional 122 fellowships in 1954, and participated in other health programs in Latin America.

Most of WHO's technical assistance activities in Latin America are directed toward the eradication of disease-bearing insects, vaccinations, and environmental sanitation, the expansion and strengthening of public health services in rural as well as urban areas, and education and training of technicians in health fields. An integrated health project was established in 1951 in El Salvador for use as a demonstration area for other areas with similar problems. This project has led to self-supported local efforts to install or improve water supplies and sewerage systems.

In addition to the country programs, WHO participates in some regional projects for disease control and for training. For example, since 1953, the government of Chile, WHO, and UNTAA have cooperated in the Inter-American Center of Biostatistics at Santiago, which offers training for students from all Latin American countries. The course includes six months of academic study and three of in-service training.

In a sense, all of the UN agencies are engaged in educational programs in Latin America. However, UNESCO's basic responsibility is to provide assistance for primary, secondary, fundamental, adult, and technical education; general educational services; scientific documentation centers; scientific research and training; and science teaching.

In 1954, UNESCO was rendering technical assistance to 15 Latin American countries and dependent territories and in addition was operating a number of regional projects. Over $500,000 was allocated to these Latin American programs. Fifty-two UNESCO experts served in these programs in 1954, and 98 fellowships were granted to Latin Americans under ETAP, plus 35 under UNESCO's regular program.

Most of the UNESCO programs in Latin America are for the improvement of primary and secondary vocational education, with emphasis on teacher training. Typically, UNESCO sends a specialist or a team of specialists to a country to advise and assist the educational authorities in revising curricula and teaching methods, introducing new courses of study, and training teachers. For example, a pilot project for demonstrating improved methods of primary education developed by the Bolivian government with the assistance of UNESCO experts has proved so successful that the government is arranging to extend the techniques all over Bolivia by a series of vacation courses for teachers from different parts of the country. Vocational education in primary and secondary schools, science teaching, audio-visual aids, and educational broadcasting are included in some of the projects.

The scope of UNESCO's operations is illustrated by some of its projects in Mexico. A regional Fundamental Educational Training Center, intended to serve all of Latin America is located there. It is jointly financed by UNESCO, FAO, ILO, and the Mexican government, which is the largest single contributor. Staff members train elementary school teachers in methods of teaching literacy, health, agriculture, home economics, rural arts and crafts, and other subjects. The student teachers, under guidance of the Center's instructors, have prepared a wide variety of teaching materials which are urgently needed throughout Latin America. These include primers, simple readers for new literates, pamphlets dealing with health, agriculture, and home improvement, as well as film-strips, motion pictures, posters, and plays for puppet theaters.

On request of the Mexican government, also, UNESCO helped to establish a Scientific and Technical Documentary Center, where scientific papers are cataloged, summarized, and translated for the use, primarily, of Latin American educational institutions, technicians, and industrialists. These are distributed through a monthly bulletin; and on request, copies of the original documents, on paper or microfilm, are supplied at cost. The work had advanced to a point where UNESCO could withdraw in 1954, and a Mexican is now directing the Center.

Other UNESCO programs in Mexico include an Applied Science Research Institute directed toward the solution of agricultural and hydrological problems, started in 1953; and an Educational Film Institute initiated in 1955.

Agriculture Programs

In addition to agriculture as such, FAO participates in technical assistance programs in nutrition, fisheries, and forestry. In 1954, it was cooperating with the governments of 21 Latin American republics and territories and also in a number of regional programs. Funds totaling over $1 million were obligated for these programs in 1954; 124 specialists were employed for a part or all of the year; and 44 Latin Americans were appointed as fellows and scholars.

The fields of cooperation and assistance in agriculture as such in which FAO is working include animal production and disease control; crop production and control of pests and plant diseases; demonstrations of farm machinery; soil conservation, irrigation, agricultural extension, and community development; rural credit, cooperatives, storage and marketing of farm products; and improvement of agricultural statistics. In many of these activities, FAO experts have remained to help work out the programs they have recommended. For example, Bolivia asked FAO for an adviser on land reform. He made his recommendations, and the government asked him to stay and administer the reforms for a brief period.

Regional training centers have been organized and conducted in milk production, distribution, and utilization, and in the organization and operation of cooperative societies. Also, FAO cooperated with IIAA and OAS in an agricultural extension training center in Peru. And when an agricultural extension service was being developed by the U. S. and Bolivian governments, several Bolivians were sent to Lima for training in a short course organized by FAO.

Extensive assistance is being given to many Latin American countries by FAO's forestry experts. In addition to the Amazon Valley project, FAO has helped to establish new forest industries or modernize techniques in such countries and territories as British Guiana, Colombia, Ecuador, Honduras, Mexico, and Paraguay. It has held conferences and meetings in Latin America on the subject; and in 1954 sponsored with the government of Argentina a training center to study techniques for the pulp and paper industry, and to plan for its development.

Similarly, fisheries have constituted an important field of FAO activity in such countries as Brazil, Colombia, Costa Rica, Dominican Republic, Ecuador, Honduras, Mexico, Panama, and Uruguay. Here, again, there have been training centers. The first was in Chile in 1952; another in Mexico was held in 1954 for the Central American region where training was given in fisheries inspection, statistical services, biological research, and practical demonstrations.

Programs directly concerned with the improvement of nutrition, in such countries as British Guiana, Colombia, Costa Rica, Ecuador, Jamaica, and Nicaragua, have been assisted by FAO. Activities include the organization of national nutrition services and supplementary feeding schemes, especially in schools. For example, in one program —designed to serve as a pattern for all Colombia—an FAO nutrition expert is assisting in the development of a school food program in Bogotá in cooperation with the National Institute of Nutrition.

Public Administration Programs

Assistance with public administration problems has been emphasized by UNTAA from the time it was established. One of the outstanding public administration programs is in Bolivia. In 1951, UNTAA entered into an agreement with the government under which it provided a group of experts—most of them from European countries—to serve as administrative assistants in the major ministries of the Bolivian government and in the office of the President. The assistants were given authority to introduce new methods and practices and to improve the organization of the agencies in which they were to serve. The program is continuing but, in 1953, UNTAA and the Bolivian government agreed that the experts should relinquish their posts as administrative assistants. Since then, they have been serving as technical consultants only, without any administering authority.

Two important regional schools for training public officials have been established with the assistance of UNTAA. The Brazilian School of Public Administration in Rio de Janeiro which UNTAA helped Brazil to establish and operate, trains students from other Latin American countries as well as Brazilians. The Advanced School of Public Administration for Central America, opened in 1954 in San Cosi, Costa Rica, is supported jointly by UNTAA and the Central American governments. This school offers special courses to senior officials of the participating governments. It also assists individual governments in organizing and conducting in-service training programs for government employees.

Smaller projects are underway in various phases of public administration in Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Nicaragua, Panama, Paraguay and Peru.

Other Programs

In addition to its work in public administration, UNTAA has undertaken cooperative activities or offered fellowships in the fields of economic and industrial development, transportation and communications, public finance, statistics, and social welfare. For all of its activities, UNTAA obligated about $1.1 million in 1954. It had 94 experts in Latin America and 47 scholars and fellows were appointed.

The ILO obligated about $550,000 for Latin American programs in 1954. These were concerned with manpower and labor problems; introduction of labor-saving techniques; vocational and industrial training programs; labor and social security law and administration. There were 44 ILO experts taking part in these programs, and 60 fellowships and scholarships. In the Dominican Republic, WMO and UNTAA have had two experts cooperating with the University of Santo Domingo since 1953 in training professional meteorologists, with emphasis on anti-hurricane protection.

Not all Latin American countries have well-developed civil aeronautical facilities or a reservoir of well-trained pilots and personnel. In 1954, ICAO obligated about $100,000 for Latin American programs. Only eight ICAO experts were in Latin America in 1954; but 35 scholars and fellows were appointed. Its most important activity has been the establishment of an aviation training center in Mexico City. Jointly financed by the Mexican government and ICAO, the Center, in 1954, had about 150 students—49 from other nearby

countries. Courses, varying from one to two years, are offered for commercial pilots, radio operators, radio mechanics, motor mechanics, aeronautical meteorologists, and operations officers.

The Organization of American States

All countries of the western hemisphere except Canada and the European dependencies are members of the OAS. With formation of this organization in 1948, the American republics acquired a sufficiently broad charter and administrative agency to actively undertake cooperative action in economic, social, and cultural development. The Pan American Union, which had been established in 1890, became the general secretariat of OAS and it has retained research as well as some operational functions. At the same time, six other Inter-American organizations which had been rendering specialized services to the Americas became member agencies of OAS. These are: Pan American Sanitary Bureau (PASB, established in 1902); American International Institute for the Protection of Childhood (1927); Pan American Institute of Geography and History (1929); Inter-American Statistical Institute (1941); Inter-American Indian Institute (1942); and Inter-American Institute of Agricultural Sciences (1942).

Although many of the regular activities of OAS and its member agencies were in the nature of technical assistance, in 1950, the OAS inaugurated an additional special program of technical cooperation. This program is designed to serve distinctive regional values to supplement the contributions made by other public and private programs. It operates regional centers to train technicians of the member states, emphasizing field training activities at each center.

The OAS technical cooperation program is small in relation to those of the UN and the United States. Financed through voluntary contributions by member countries, its total obligations for 1954 came to about $1.75 million. In addition, governments of the countries where the training centers are located made some contributions in cash, buildings, or equipment. From its beginning in April 1950 to the end of 1955, member countries pledged for OAS technical cooperation programs over $6.5 million of which the United States contributed a little over two-thirds. (For OAS expenditures by fields of activity and contributions to OAS by member countries, 1951 through 1955, see Appendix Tables 43 and 44.)

The Inter-American Economic and Social Council defined and in-

augurated the OAS technical assistance program but, from 1950 to 1955, the program has been planned and supervised by a Coordinating Committee for Technical Assistance. The Secretary General of OAS is chairman of this Coordinating Committee, heads of the member agencies are members, and an executive secretary is immediately in charge of daily administration.

By 1955, seven regional training centers—each directly administered by one of the member agencies—had been established by OAS in Latin American countries. In addition, the work of two short-term centers had been completed. One of these was a two-month workshop on the teaching of communicable disease nursing held in Guatemala City in 1951; the other was a training center for directors of the cooperative movement, in which six-month courses were offered in 1951 and 1952 at the national universities of Puerto Rico, Colombia, and Chile.

The training center for Technical Education for the Improvement of Agriculture and Rural Life is sponsored by the Inter-American Institute of Agricultural Sciences. With a central service unit at the Institute's headquarters in Turrialba, Costa Rica, three sub-centers have been established in Havana, Cuba; in Lima, Peru; and in Montevideo, Uruguay. Established in 1951, the project offers a number of short international and national courses in extension work, agricultural economics, farm management, pasture and range management, home economics, land use, soil conservation, irrigation and drainage, grain storage, forestry, and other aspects of agriculture. The national courses are offered at the request of governments, who provide technicians for the project. In 1955, there were 29 faculty members, 260 students in international courses, and 500 students in national courses. The 1955 budget was close to $500,000.

The Pan American Aftosa Center, established in 1951 in São Bento, Brazil, is administered by PASB and the Inter-American Institute of Agricultural Sciences. The Center offers two training courses each year, and also engages in research and provides some direct services to governments. In 1955, with a budget of almost $250,000, there were 11 faculty members and 70 students.

The Inter-American Housing Center, at Bogotá, Colombia, was established in 1952, and is administered by the Pan American Union in cooperation with the National University of Colombia and the Instituto de Credito Territorial. In 1955, 26 students received instruction from nine faculty members in low-cost housing design, planning, and construction. Research at the Center has concentrated on construction

methods and on developing the use of local construction material. The budget, in 1955, was about $215,000.

The center for Workshops on the Administration of Children's Services, administered by the American International Institute for the Protection of Childhood, is located at Montevideo, Uruguay. Operating since 1952, it offers a two-month annual seminar to 10 students from 10 countries. Technicians then visit each participating country to organize national seminars with the assistance of the trainee from that country. During 1955, 28 faculty members participated; the budget was about $32,000.

The Inter-American Training Center for Economic and Financial Statistics, established in 1953 in Santiago, Chile, is sponsored by the Inter-American Statistical Institute and the Pan American Union, in cooperation with the National University of Chile. A seven-month course is offered in statistical analysis. In 1955, the budget was about $160,000; there were 13 faculty members for 68 students.

The Inter-American Rural Normal School, established in 1954 in Rubio, Venezuela, is attached to the national Normal School "Gervasio Rubio." It is a cooperative project of the Pan American Union and the Ministry of Education. In an effort to provide the nucleus of a faculty for a new normal school in each country, the Rural Normal School gives a two-year course. Nine faculty members and 80 students participated in 1955. The budget that year amounted to about $173,000.

The Training Center for the Evaluation of Natural Resources is located at the Rural University near Rio de Janeiro, Brazil. It is administered by the Pan American Institute of Geography and History in cooperation with the Rural University. Started in 1954, it gives a full academic year of training annually, stressing modern methods of resource evaluation, with specialization in geology, water resources, vegetation, geography, and soil. In 1955, the budget was about $145,000; there were five faculty members and 53 students.

The OAS technicians not only engage in teaching and research at the training centers but also consult with the governments of individual countries on request. Also, OAS pays for the short-term services of consultants, and pays for fellowships covering transportation and expenses of many of those who attend the training courses it offers.

The Inter-American Economic and Social Council has begun to explore new methods of technical cooperation in the field of public administration. At the request of the Council, a survey was made in

1954 and 1955 by the Public Administration Clearing House, a non-profit U. S. organization.

The effort to recruit and retain competent personnel for the OAS technical cooperation program has been hampered, not only by financial stringencies, but especially by the fact that technicians are offered only short-term assignments. The turnover rate has exceeded 50 percent per year.

The World Bank and Export-Import Bank

Loans made by the World Bank and the Export-Import Bank for the purpose of speeding economic development carry technical assistance to the receiving countries in many ways. The World Bank and the International Monetary Fund also render direct technical assistance to their member governments.

The principal technical assistance contribution of the World Bank probably is its program of economic surveys. It has financed and directed broad surveys in a number of Latin American countries, aimed at determining the needs and opportunities for development in the different sectors of the economy, and ways of overcoming the obstacles to development. It also assigns special representatives to member countries to assist in planning and financing their development activities. During 1954, special representatives of the Bank served in Brazil, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, and Panama, advising and assisting the governments on various developmental problems. The Bank has also been providing training for a small number of people in careers related to its work. In 1955, with financial assistance from the Ford and Rockefeller Foundations, the Bank established an Economic Development Institute. A small selected group of senior officials from member countries will attend the Institute for six months of intensive study and training in problems of economic development.

The International Monetary Fund also assigns experts and specialists to advise and assist member governments. In 1954, Fund specialists served in 11 Latin American countries, for varying periods of time, advising on fiscal, monetary, foreign exchange problems, and related matters.

The Export-Import Bank, established in 1934, has made many "development" loans for the specific purpose of promoting economic growth. The first such loan in Latin America was to Haiti in 1938. By the end of 1953, the Bank's development loans to Latin America totaled $847.8 million. (See Appendix Table 46.) The number and

volume of development loans were curtailed drastically in 1953, but increased materially in 1954 and 1955.

The World Bank made its first loans to Latin America in 1948. All have been for development purposes, and at the end of 1955 totaled about $580 million. (See Appendix Table 46.) All of the World Bank's development loans are made directly to Latin American governments or their agencies. However, in some instances those governments or agencies have acted as re-lending organizations by making proceeds of the loans available to private concerns.

Over the years, the development loans of both banks have been used largely for such purposes as power, irrigation, telecommunications, railways, highways, mines, manufacturing establishments, and other enterprises. The loans may be for new construction and for the early stages of operating new installations, or for rehabilitating and improving existing enterprises.

These loans have carried technical assistance to the receiving countries in many ways. Usually, one of the first steps in considering the application for a loan is a survey to assess the contributions which the proposed loan would make to the development of the country. If the loan is to be used to aid in construction, the banks may require that competent construction specialists be employed. Some of the loan funds may be used by the receiving agencies to employ individuals or firms from other countries who have knowledge and ability not available in the country to which the loan is made. These managers and techinicans pool their knowledge and ability with that of nationals of the recipient country in planning and construction, and sometimes in the early stages of operation.

The primary objective of the banks in providing this assistance is to insure that the receiving agencies utilize the proceeds of their loans effectively, and to create conditions which will result in payments of interest and principal as they fall due. Often the revamping of administration and management is as important as the physical resources which a loan makes possible.

Programs of U.S. Religious Groups

Long before governments undertook technical cooperation programs, religious groups from the United States and Europe were making significant contributions to Latin America's social and economic development. The size of the job being done by U. S. religious groups alone—and our surveys concentrated on them rather than the European groups—illustrates their importance.

Over 60 U. S. religious groups—Catholic, Protestant, Jewish, and interdenominational—are conducting programs of health, education, and agriculture in every country of Latin America. It has been estimated that U. S. missionaries are doing the equivalent of the full-time work of 2,000 technicians in programs of technical cooperation. Not all of the missionaries engaging in these activities have had special training in medicine, education, or agriculture. In general, the programs of the religious groups serve the poorer people in each country.

Health Programs

Religious groups in Latin America are sponsoring over 100 hospitals, clinics, and nursing schools in 19 Latin American countries and dependent territories. The medical institutions of religious groups range from well-staffed, well-equipped modern hospitals to small treatment rooms in workingmen's areas of the cities or at rural mission posts. Some of the hospitals have schools for training nurses. The treatment rooms are staffed sometimes only by a missionary without medical training who gives inoculations and dispenses simple medicines. Although very few new techniques and methods are being introduced, these activities are bringing medical care to relatively large numbers of people who would not receive it otherwise. Only a few programs of environmental sanitation, personal hygiene, and preventive medicine are carried on.

One of the difficult problems in the programs of religious groups is the fact that too little technical information and guidance are provided by home offices. One agency which appears to be making a special effort to provide such technical guidance is the Christian Medical Council for Overseas Work. This agency gives technical aid to medical missionaries and to doctors of all nationalities serving through missionary institutions.

Education Programs

The religious groups have placed major emphasis on education in their technical assistance programs. Religious groups in the United States are sponsoring more than 1,000 primary schools, some in every Latin American country; about 150 secondary schools, located in all except one country; and other types of schools in all except two countries—including about 60 commercial and vocational schools.

A large proportion of these schools teach only the first three or four grades, but a small number have grown until they now offer

courses from kindergarten through high school. Some of these schools are of mediocre quality judged by present educational standards. But even when they are, they are of substantial importance, simply because of their numbers and because many are located in regions where there are few other schools.

Most of the primary and secondary schools follow the curricula prescribed for public schools by the ministries of education in the various countries. However, some schools, avoiding the set pattern, are attempting to develop curricula which, without subordinating the old established subjects, will give pupils more knowledge of the modern world. Some are also endeavoring to introduce improved teaching methods. Examples of a few of the schools which have broken away from traditional methods are found among schools of the Protestant, Catholic, and Jewish groups.

The Presbyterians sponsored a small mission school more than 80 years ago—the Mackenzie Institute in São Paulo—which has grown into one of the largest and most important educational institutions in Brazil. The Institute, with an enrollment of about 5,000 students, has a primary school from kindergarten through the fifth grade, and a junior high school with four years of work. Students who have finished junior high may go to either of three Institute schools—senior high with three years of general classical study in preparation for normal school or university study; a commercial school with three years of study in secretarial work or accounting; or a technical school with a course in industrial chemistry, electricity, and land surveying. The Institute also has a university requiring five years of study for a degree in engineering, architecture, and law; three years in arts and science; and four years in business administration. In a rapidly growing industrial area, Mackenzie has become significant in its environment. It has broken ground in many ways—boys and girls, Negroes and whites of all faiths and denominations, study together. The physical education department and recreational activities are emphasized. As early as 1900, some of Mackenzie's teachers were hired to help reorganize São Paulo's public school system. Now the majority of teachers are Brazilians. The policy-making Council of the Institute also includes Protestant and Catholic members—a few from the United States, but all living in Brazil. Unlike most schools of the religious groups, Mackenzie has been self-supporting almost from its beginning.

The Colegio San José is sponsored by a Catholic group in Bluefields, Nicaragua—a town of 7,500, with a great mixture of races and

nationalities, and where there are many poor, unemployed, and underemployed people, with few opportunities for personal advancement or encouragement of the young people. The Colegio is very different from the Mackenzie Institute, but like the Institute, is a significant factor in its environment. The Christian Brothers who operate the school offer six years of study in the primary grades followed by two years in secondary schools—both offering the curriculum required by the Ministry of Education. In addition, there are special vocational and commercial courses for some of the students. All races and denominations attend. A significant thing about the Colegio is the large number of extracurricular activities. These include a large band, an orchestra, a choir, a Boy Scout troop, printing and carpentry shops, a "ham" radio station, and a small photography shop. There are no tuition fees for the primary grades and about a dollar per month is charged in secondary grades only for students who can afford to pay it. The Colegio is not self-supporting and must rely heavily on its sponsors for financial support.

A third type of school is in the industrial area of Rio de Janeiro. There the ORT Vocational Center—ORT stands for Organization for Rehabilitation Through Training—is now supported entirely by the local ORT Brazilian Jewish Society. It was started in 1943 with assistance from the ORT Federation located in the United States. By 1953, about 100 boys and girls were attending, most of them from Jewish workingmen's families although all races and creeds are admitted. No fees are charged, and financing is a serious problem. A four-year course in machine shop techniques, design and mechanical drawing, applied physics, and, for the girls, sewing and dressmaking, in addition to regular junior high school subjects is provided for children who have finished standard primary schools.

These and other schools of the religious groups are turning out students with technical skills and knowledge which are still very scarce in Latin American countries.

Agriculture Programs

The two main types of agricultural projects of U. S. religious groups, in addition to teaching vocational agriculture in the schools, are the operation of farms and programs of extension education—usually connected with a school. There are probably over 40 projects of this type in Latin America. The farms are used primarily to produce food for the staff and students of the schools. At some of them, improved livestock, new farming practices, and experimental

results could be adopted with profit by surrounding farmers. But in no case is there an extension program adequate to stimulate this. Most of the relatively few extension education projects are carried on with very low-income farmers. They consist of donations of small quantities of seeds, assistance in vaccinating livestock, selling insecticides at cost, and explaining their use to individual farmers. Some advice is being given Protestant missionaries in improving rural programs by Agricultural Missions, Inc., a U. S. agency, which works with missionaries around the world.

In Bolivia, one of the more successful agricultural programs of missionaries has been a farm purchase and home development scheme, together with educational and health programs, undertaken by the Baptists on the high plateau near Lake Titicaca. The Methodists conduct a high school in La Paz, and Seventh Day Adventists have an extensive rural program in that country.

Programs of U.S. Foundations and Philanthropic Organizations

For many years, the private foundations and philanthropic organizations have been cooperating in the application of new ideas and techniques to Latin American problems. A sizable part of their direct contributions to the increase in skills and knowledge in Latin America has been in the form of scholarships and grants for individuals. However, they have also conducted programs which have directly helped Latin American countries in their drives for social and economic development. At the same time—as private groups, with a considerable amount of freedom for experimentation and innovation—they have served as a testing ground for methods and techniques in technical cooperation. The bilateral and multilateral programs have profited by the lessons on what does and does not work, which have been painfully learned by the private groups. Brief descriptions of only a few of these programs are needed to illustrate the work of such organizations.

The Rockefeller Foundation

In 1914, the Rockefeller Foundation initiated its first health program in Latin America. During succeeding years, it developed cooperative health programs in a total of 23 countries and dependent territories. It was the dominant technical cooperation agency in Latin America in health and sanitation until the U. S. bilateral program was launched.

The Foundation's program began with campaigns to control hookworm, but soon programs to combat yellow fever and malaria were added. It became clear that, if the spectacular gains from these campaigns were to be preserved, the Latin American governments would need to develop permanent health organizations with large numbers of trained personnel. Thus, the program was expanded. A few universities were assisted in upgrading schools of medicine. Some governments were helped in improving their health services. A fellowship program for Latin American health workers was started. The Foundation helped to create and operate schools of public health and nursing in several countries, and to establish and support research centers.

From the beginning up through 1952, the Rockefeller Foundation spent somewhere in the neighborhood of $16 million on medical and health programs in Latin America, chiefly through direct programs, grants for equipment, and fellowships for study abroad.

In 1943, the Rockefeller Foundation joined with the government of Mexico in a program to increase the production of food crops in Mexico. This is a continuing program of agricultural research which has been outstandingly successful. In the first 11 years of the program, the Foundation contributed over $2.5 million and current appropriations are about $300,000 per year. In 1950, a similar program was established in cooperation with the government of Colombia, and a third has been launched in Chile. Along with these activities, the Foundation is increasingly making grants to agricultural colleges in Latin America; such appropriations totaled nearly $245,000 for the year 1952.

The principles set up by the Rockefeller Foundation for its own guidance early in its operations have been important to the whole concept of technical cooperation. These were: The Foundation would be "a partner but not a patron." It would work through government and under its authority and direction. And "the country must be sufficiently interested to risk something, to follow the plan critically, to take over the cost of the work gradually but steadily and within a reasonable period to assume the entire burden of direction and expense."

The Kellogg Foundation

The Kellogg Foundation has been active in Latin America since 1930. Its programs have been entirely in the field of health, with emphasis on fellowships for advanced study abroad, and on improving education in the fields of medicine, nursing, public health, and hospital administration. The Kellogg Foundation's appropriations, from

1930 to 1954, which went in varying amounts to all countries of Latin America, totaled approximately $2 million. In that time it granted 631 fellowships to Latin Americans for study in fields related to health.

American International Association

A third organization, which approaches the foundation in form, is the American International Association for Economic and Social Development (AIA). It was organized in 1946 by Nelson Rockefeller and his brothers "to promote economic and social development in the underdeveloped areas of the world." In 1948, AIA undertook two major cooperative programs with the government of Venezuela, and two others in Brazil.

One of AIA's Brazilian programs is jointly financed by AIA and the state of Minas Gerais, and is administered by the Association of Credit and Rural Assistance (ACAR). The description of this program of supervised credit, farm and home extension education, distribution of materials, and medical care and health education, appears in one of our interim reports. This was *The Case Study of the Agricultural Program of ACAR in Brazil.* The success of this four-way interlocking program led to the establishment of a similar organization in the dry northeastern section of Brazil, financed solely by Brazilian banks and the federal ministries of agriculture and education. The other AIA program in Brazil offers agricultural extension in selected communities of the state of São Paulo.

One of the Venezuelan programs also was directed toward rural development, combining supervised credit, extension education, special studies, and farms for training agricultural workers. The second was a nationwide educational program on nutrition, using the techniques of mass communications to improve the diet and health habits of the Venezuelan people. The total expenditure of AIA on the Venezuelan programs was slightly over $2.5 million for the years 1948-1953. A substantial portion of this came to AIA as contributions from U. S. oil companies operating in Venezuela. The contributions of the Venezuelan government to these programs totaled about $4 million for the same period.

U.S. Trade Unions

Technical assistance in trade union organization and management for the benefit of unions in Latin America and the West Indies was introduced by organized labor in the United

States soon after the end of World War II. At that time, both the American Federation of Labor (AFL) and the Congress of Industrial Organizations (CIO) established special Latin American departments and began to issue regular publications in the Spanish language for circulation among union members of the American republics. Later, the United Mine Workers of America (UMW) entered the picture with a special full-time representative. Its particular emphasis was on assisting and cultivating relations with the mining unions of Chile, Bolivia, Central America, and in the Caribbean area.

The U. S. unions furnish to Latin American unions information and data prior to negotiations for the establishment or renewal of collective agreements; appropriate background literature dealing with the structure and functions of unions in the United States; assistance in planning workers' education activities. Periodic visits are made by U. S. organizers and specialists, who occasionally advise on plans for improving labor-management relations, especially in U. S.-owned plants. In a few instances, labor representatives have been requested by Latin American governments to give advice on labor legislation and the role of government in labor disputes.

A few specific examples illustrate the kind of cooperation undertaken by unions in the United States and those in Latin America. The Joint United States-Mexico Trade Union Committee has succeeded in easing many labor problems in the field of agriculture, construction, and transportation. Mutual assistance pacts have been agreed to by the cement workers, automobile workers, and government employees of Mexico and the corresponding unions in the United States. Cuban hotel and restaurant workers have been trained in the United States. The United Steelworkers of America has actively participated in the organizational campaigns and subsequent collective bargaining negotiations in the bauxite industry in Jamaica and British Guiana. The Oil Workers' International Union of the United States has assisted the oil workers of the Dutch West Indies, Colombia, Bolivia, and other countries.

The recently merged AFL-CIO and the UMW are active members of the Inter-American Regional Organization of Workers (ORIT), which is the Western Hemisphere branch of the International Confederation of Free Trade Unions. The U. S. unions contribute the major share of ORIT's educational and organizational expenses, which include exchange of visitors, workers' education seminars, and publication of educational pamphlets on trade union administration,

collective bargaining, labor-management cooperation in productivity problems, and promotion of industrial peace.

Private Business and Technical Cooperation

Profit-making concerns and their activities do not normally enter into discussions of technical cooperation. However, the U. S. Act for International Development defined technical cooperation as "programs for the international interchange of technical knowledge and skills." An examination of the interchange of technical knowledge and skills between the United States and Latin America reveals that a very large amount of it takes place within the normal processes of business and trade.

Thousands of U. S. firms buy, sell, manufacture, and conduct other operations in Latin American countries. The total investment of U. S. firms in Latin America has increased steadily since World War II. (For value and earnings of U. S. investments in Latin America, in selected years, see Appendix Table 47.) In 1954, the direct investment (including investment in branches and in subsidiaries in which they owned a controlling interest) of U. S. firms in Latin America was over $6 billion, as compared with slightly over $3 billion in 1946. About 27 percent of this 1954 investment was in the petroleum industry, 20 percent in manufacturing, 18 percent in public utilities, 16 percent in mining and smelting, 10 percent in agriculture, and 6 percent in trade. In 1950, there were about 800 branches of U. S. firms in Latin America, and about 1,200 Latin American companies in which U. S. firms owned a controlling interest. Since that time, without doubt, there has been a continued growth in both categories.

Part of the effect on technological advance of direct U. S. investments in branch plants of Latin American firms is a result of the habitual U. S. business practices which firms take with them when they go abroad. Most of them operate at home in highly competitive markets. Such firms are constantly carrying on research and are continuously modifying both products and methods. When they carry these practices abroad, they set an example for domestic firms.

In the course of our study, we have uncovered numerous examples of specific transfers of techniques which have come about through the normal profit-making activities of U. S. firms operating in Latin America.

Parent firms send supervisors and technicians to introduce U. S. methods and techniques and adapt them to their operations in Latin

America. Technicians from the United States often install machinery and equipment and train local employees of the Latin American branch or subsidiary in its operation and upkeep. Substantial numbers of Latin American employees are sent to the companies' U. S. plants for training in skills and professions, ranging from simple machine operation to executive and management functions. Informal on-the-job training to upgrade the skills of local employees is practiced continuously by many companies. And a considerable number have organized training courses, lasting from a few days to several months, in a wide variety of fields.

Fellowships and scholarships are provided by some business firms for university study in the United States. Findings of the research and development laboratories of U. S. firms are made available to their Latin American affiliates, and products and processes of the affiliates are studied and tested in these laboratories. For example, a retail firm which purchases merchandise from Latin American manufacturers has helped them improve the quality of their products and reduce costs; and has drawn on the services of its own testing laboratories in the United States for evaluation of these products and for counsel on their improvement. A number of firms have established schools, hospitals, and health centers to serve their employees and their families. A few have made sizable grants for the support of local institutions and activities not related to their business operations.

In trade, U. S. firms have made notable contributions to technological improvements in Latin America. They and their affiliates buy bananas and other fruits for export, livestock for their packing plants, cotton for ginning and processing, sugar cane for their mills, components for machines which they manufacture, and many other products. Many of these firms give technical advice and assistance to the suppliers to enable them to increase both the quality and quantity of their products. A buyer of raw cotton who finances cotton farmers, for example, has employed agronomists to instruct farmers, in order to protect his investment in the crop. He has also introduced soy beans as a supplementary crop in one country. A canner of fish has provided boat builders with an improved boat design which permits fishermen to go longer distances offshore and to stay at sea for longer periods of time, and thus to increase catches.

Given an opportunity to sell its own products abroad, a country can buy machines which it has not developed; it can buy automobiles which it does not manufacture; it can purchase the services of tech-

nicians which it does not possess. Many U. S. firms and affiliates export a wide variety of commodities for sale in Latin America. These include heavy equipment for mines and manufacturing plants, locomotives, automobiles, tractors and farm machinery, pharmaceuticals, chemicals, household supplies, clothing, and foods. Latin American purchasers receive advice and assistance in the installation and operation of equipment. One agricultural machinery and equipment manufacturer, for example, improved the market for his products by conducting classes in the operation and maintenance of tractors and agricultural implements. Retail firms in Latin America receive *information, instruction, and training in many lines*—sewing machine operations and food preparation, for example—which they pass on to the ultimate purchasers of their commodities.

Private U. S. research agencies and management and technical consulting firms are hired by Latin American firms and governments to do technological and management research on such subjects as petroleum extraction and refining, mining and ore refining, metal casting and foundry operations, and the milling of corn and wheat.

Latin American firms import technology through licensing agreements under which they manufacture products patented by U. S. firms, or use patented techniques and services in plant construction and operation, and in training employees. A number of U. S. publishers are producing trade and business periodicals and books for Latin America published in Spanish and Portuguese.

Thus, private U. S. firms have been transferring techniques to Latin America for many years. These activities have increased as U. S. private investment has grown in volume and has become more diversified. While not carried on primarily to transfer knowledge and skill, private business is, in fact, an effective means to this end.

Unfortunately, however, only a low proportion of the many small firms which are still using primitive practices throughout Latin America have as yet been reached by the methods and techniques which are being introduced by U. S. firms and their affiliates.

INTERAGENCY COLLABORATION

THE UN, OAS, AND U. S. technical cooperation agencies quite early established liaison procedures for consulting on proposed activities. Despite these procedures, there was a continuing feeling among officers in each program that the others failed to keep them sufficiently informed. A new effort was made in 1954 to promote

collaboration between the agencies, when the UN and United States sent instructions to their field missions emphasizing the importance of frequent exchanges of information and better coordination of efforts. At the same time they stipulated that field officers should meet twice a year for a review of problems, progress, and plans for the future. The OAS and UN have worked out some procedures to keep each other informed, but liaison between the U. S. and OAS programs has been less effective. The weakest link in liaison, however, is the lack of adequate contact between the governmental programs and the numerous private activities.

Many fine instances of effective cooperation exist in spite of the lack of adequate formal machinery for coordination and consultation on technical cooperation.

One example is found in the Artibonite Valley in Haiti. Following a UN survey of the basic assets and liabilities of the area, the Export-Import Bank made a loan for irrigation works and the leveling of land required for the project. A private firm is constructing the system, and IIAA is providing assistance in water operations and land use. Yaws in the area is being attacked by PASB and malaria by a health servicio, which is also providing safe water supplies and administering health centers. Another example is found in a training center on agricultural extension, organized in 1953 in Peru. Men, money, and ideas are provided by FAO, the bilateral servicio, and the government of Peru. Recently, OAS began participating in the program which is serving extension workers from six Andean countries.

Plan Chillan is an interesting experiment in the concentration of technical cooperation programs in a model area. In the belief that bilateral programs in Chile might make a greater impact if a substantial part of the available funds and personnel were focused in a single area, this plan was started in 1953 by the U. S. and Chilean governments. Now it is drawing into the area programs of the UN agencies, foundations, and other private groups.

About 70 percent of the U. S. funds and personnel available for technical cooperation programs in Chile is used in the area. At administrative headquarters in Chillan (to the South and well away from the nation's capital), a Chilean coordinates the projects and programs carried forward by the different U. S. missions and host officials. The central ministries of agriculture, health, public works, lands and colonies, and the Chilean Development Corporation are all cooperating in the area program.

In the Chillan area, the University of California has a contract to work with the University of Concepcion in agricultural education, research, and extension. Several Chilean industrial concerns have been urged to extend their activities in the area. As many public and private efforts as possible are to be stimulated to participate in the development of the three provinces covered by Plan Chillan.

There are interesting elements in this experiment. It promotes administrative coordination of the many technicians working on different projects. Program planning for a limited area is more manageable than for the whole country. One danger, however, is that the enthusiasm for the concentrated program may lead to the withdrawal of support for useful programs outside the area which should not be dropped.

Country Examples

Another way of discovering interlocking elements in the varied programs and the distinctive contributions of each type of agency is to look at the highlights of the activities in specific Latin American countries. A sketch of one or two countries can by no means indicate the nature and scope of technical cooperation throughout Latin America, because each country has distinctive problems and a different combination of programs and emphases. And even in the two countries we have chosen, Brazil and Ecuador, there are many more problems and programs than we mention here.

These two illustrations should, however, convey some impression both of the variety and importance of technical cooperation programs in countries of different size and stages of development. Brazil and Ecuador, like the other Latin American countries, have at least one common problem. A swiftly growing concern about general levels of living and a rapidly increasing population create a critical need for a better-informed use of human and physical resources.

Brazil

Brazil is Latin America's largest country on two counts—size and population. It has an area of more than three million square miles and has a population approaching 60 million. There are great variations in climate and topography and in the developmental needs of Brazil's different regions.

In many ways, Brazil is developing very rapidly, but 64 percent of its population is still rural—with many farmers still following tra-

ditional practices—and less than 50 percent of Brazilians over 10 years old are literate. Most of Brazil's exports are farm products.

Industry is expanding steadily and vast mineral and water resources are being developed. Large iron mines have been opened and steel plants built. The greatest industrial concentration is in the state of São Paulo, where the principal industries are textiles, food processing, ceramics, glass, chemicals, pharmaceuticals, metals, and automobile assembly.

Until the past decade, most of Brazil's railways and highways had been built mainly to connect separate inland cities with separate ports. Recently, modern highways between some of the major cities have been built, but secondary and rural roads are still a major problem.

The World Bank and the Export-Import Bank have made loans to Brazil for such purposes as electric power, industrial development, railway and highway construction. Direct private investment from the United States totaled slightly over $1 billion in 1954.

The U. S. government is cooperating with the Brazilian government in health, education, and agriculture servicios, and a number of programs of public administration, industry and mining, labor, transportation, and community development and housing.

The largest single technical cooperation program in Latin America is the health servicio established in 1942. It has concentrated on the control of diseases and a training program for Brazilians. It has built hospitals, clinics, health centers, laboratories, water and sewerage systems. It has initiated medical care, industrial hygiene, and public health programs in cooperation with national, state, and municipal governments. And it has trained doctors, dentists, laboratory workers, engineers, nurses, nurses aides, and midwives, as part of the program to reduce endemic and communicable diseases, to improve nutrition, and to reduce mortality rates.

The education servicio was established in 1948, primarily to help fill the demand for skilled workers created by Brazil's increasing industrial expansion. It has been seeking to improve the teaching methods and shop facilities in a number of technical and industrial schools through teacher training, preparation of shop manuals, and other teaching aids. It also has a training-within-industry program for foremen and employees.

The IIAA began to cooperate in agricultural programs in 1943, but the agricultural servicio was established only in 1953. Activities include experimentation in rubber and cacao production, soil conserva-

tion, irrigation, crop storage, food processing and marketing techniques, dairy and pasture practices, vocational education, and training in agricultural and veterinary colleges. Purdue University is working with the Rural University of Minas Gerais on agricultural extension and home economics.

Michigan State University is working with the Getulio Vargas Foundation in a school of business administration; and assistance is being given in public administration courses at other universities.

In 1954, a total of 97 U. S. administrators and technicians participated in the bilateral programs in Brazil, and there were 166 Brazilian trainees. The 1954 contribution of U. S. funds for all bilateral technical programs in Brazil amounted to over $2 million; that of Brazil, over $22.5 million.

Four of the UN agencies have had programs in Brazil from the time ETAP was started. The establishment in Rio de Janeiro of the first school of public administration in Latin America was a joint activity of UNTAA and the Getulio Vargas Foundation. The major financial support comes from Brazil's government with some from several public and semipublic corporations. The school is attempting to prepare good civil servants for all Latin American governments, and as a means to this end is seeking to establish special relationships with government ministries to pave the way for government appointments for its graduates. The school has embarked on an ambitious translating project to overcome the scarcity of publications on public administration available in the Portuguese language.

In recent years, the ILO has been cooperating with an independent Brazilian agency, the National Industrial Apprenticeship Service. In 1942, the Brazilian government established a factory payroll tax for the purpose of establishing apprenticeship schools. Industry, through this Service, operates the schools—over 100 of them—in which young industrial workers from 14 to 18 years of age receive instruction in any of 80 trades. With the cooperation of ILO, directors, supervisors, and teachers in industrial schools throughout Latin America now receive training in group courses especially organized for them.

In addition to FAO's extensive forestry program in the Amazon Basin, FAO experts are cooperating in a variety of programs—fisheries development, plant and animal production, land and water use. Help is being given in connection with rural community studies and problems of colonization and land reform.

In 1954, UNESCO experts in Brazil were advising on establishment of a new laboratory for geophysical research; cooperating with the

Institute of Agricultural Chemistry; and working in such fields as geology and sociology.

A total of $366,000 was obligated in 1954 for all of the UNTAA, FAO, ILO, and UNESCO programs in Brazil. In that year, 30 experts were assigned by the UN agencies to Brazil, and 25 appointments for fellowships and scholarships were made.

Two of the OAS training centers—the Aftosa Center and that for the evaluation of Natural Resources—are located in Brazil.

Private foundations, religious groups, and U. S. business interests have been active in Brazil. One of the earliest health programs of the Rockefeller Foundation was located there, and it helped to clear endemic malaria from many regions. Two of AIA's major cooperative programs are in Brazil. In 1953, U. S. religious groups in Brazil were sponsoring 318 schools, 16 hospitals and clinics, and 5 farms and agricultural education centers. The Lavras Agricultural College is an old, well-known, and highly respected Presbyterian-supported institution.

Ecuador

In contrast to Brazil, Ecuador has a total area of only a little more than 100,000 square miles and a population of about 3.5 million. It extends from the lowlands along the Pacific across the summit of the Andes into the upper reaches of the Amazon Basin. The coastal area is humid and largely in forests, and the eastern slope of the Andes is sparsely populated with most of the inhabitants dependent upon subsistence farming. Indians who still follow their traditional way of life make up something like 50 percent of Ecuador's population.

Ecuador is primarily an agricultural country. Exports of bananas, coffee, cacao, and rice supply most of its foreign exchange. Petroleum extraction and refining, though small in comparison with some other Latin American countries, are sufficient for domestic consumption and a small amount for export. Otherwise, both mineral production and manufacturing are little developed. The manufacture of Panama hats, once an important industry, has declined in recent years on account of the falling off in foreign demand. Probably one-half of the wool production in the country comes from small flocks owned by Indians, and much of the cloth for domestic use is woven by hand. There is a great need for improvement in all forms of transportation. There are less than 800 miles of railway in the entire country. More and better highways are needed, especially for carrying commodities

from the mountainous interior to the cities and ports. Aviation is *becoming increasingly important.*

The Export-Import Bank has made loans to Ecuador for highway construction, highway equipment, and airport improvement, as well as water works, sewage disposal systems, and housing. In 1954, the World Bank made its first loan to Ecuador—$8.5 million for highway construction. That same year, the government had created a National Board for Planning and Economic Coordination to establish priorities and coordinate the various developmental programs. And the World Bank sent advisers to assist in the organization of the National Planning Board and to advise on measures to mobilize local capital. Direct investments of private U. S. concerns in Ecuador were about $20 million in 1954.

There is a widespread program of technical cooperation—bilateral and multilateral. Under the bilateral program, servicios in health and sanitation, education, agriculture, and industry have been established. The health servicio, among the first in Latin America, was established in 1943. In the beginning, its activities were concentrated on hospital construction, sewage disposal and water supply systems, and malaria control. In recent years, increased emphasis is being given to establishing and operating local health centers, health education programs, environmental sanitation, and training for nurses. The education servicio was established in 1945 to cooperate in improving rural and vocational education and teacher training. It participates actively in the conduct of a number of normal schools. It has introduced revised curricula and improved teaching methods in these schools and has helped develop better methods and teaching materials for rural and vocational schools. And it is working with urban elementary schools in Quito.

Bilateral cooperation in agriculture began in 1942 with a research program designed to expand the production of agricultural commodities needed by the United States in the war effort. This was curtailed following the end of the war, and only in 1952 was a servicio organized to improve Ecuador's agriculture. It has inaugurated an extension program designed to carry research findings to producers and help introduce better farming methods. Training Ecuador's technicians for agricultural extension work is also an important aim of the servicio. In 1954, the University of Idaho, under an inter-university contract, began cooperating with the universities of Quito and Guayaquil in upgrading their agricultural teaching and research.

In industry, in 1952, the United States began rendering advisory

assistance, especially in handicrafts and small-scale industry. Later, a servicio was established to help improve the manufacture and marketing of cloth. Better looms are being put into operation. Better methods of spinning, weaving, dyeing, and styling are being introduced. Better marketing methods and practices are sought.

Technicians from the United States are cooperating in programs to improve railway transportation and civil aviation. A training program in labor has been started. In 1954, 43 U. S. technicians were on duty in Ecuador and 48 nationals of Ecuador participated in training programs. In 1954, the U. S. contribution to the bilateral program was $1.3 million and the contribution of the government of Ecuador was $1.2 million.

The UN and its specialized agencies are also active in Ecuador. In 1954, six agencies—UNTAA, ILO, FAO, UNESCO, ICAO, WHO—were contributing almost $270,000 in ETAP funds. The largest programs are those of FAO and UNTAA. During 1954, 27 UN experts were assigned to Ecuador, and 30 Ecuadorans were appointed for fellowships and scholarships.

A National Housing Agency has been established by Ecuador's government as a result of the work of an expert on low-cost housing supplied by UNTAA. A long-range rural and urban housing program is being developed, with special emphasis on the utilization of local materials. An ILO team, consisting of a vocational training expert and instructors in electricity, automobile mechanics, and machine tool fitting, began in 1954 to advise and assist in a survey of manpower needs in basic industries and the development of vocational schools and centers to meet these needs. An FAO fisheries expert helped launch a pilot project for processing fish. Also, FAO joined with OAS in conducting a short-term training center in nutrition and home economics.

In 1953, U. S. religious groups were sponsoring 16 schools, 4 hospitals and clinics, and 7 farms and agricultural education centers. Two of the institutions—the United Indian Andean Mission and the Rural Brethren Mission—serve Indians exclusively. Each has an elementary school, a health clinic, and an agricultural program.

Additional examples and details could be given which would emphasize the many and diverse programs of technical cooperation—bilateral and multilateral, public and private—underway in one small country.

Technical cooperation in Latin America is not one program, but many. A number of public agencies and private groups are participating. Their programs attack problems in varied fields, differing widely from country to country. But all have the same over-all objective —to accelerate development and raise the levels of living in host countries.

Similar activities are carried on by several agencies, but there is little evidence of competition or duplication of effort. The needs and desires of the people and governments of Latin America are so great and the region is so large, that there is room for many more technical cooperation programs than now exist. From the standpoint of the improvement of programs, a large number of separate agencies of technical cooperation is an advantage. Technical cooperation is still in the experimental stage; creative experimentation is more likely with many independent programs. At the same time, a continuing exchange of information among the public agencies and private groups and coordination of their programs can increase their effectiveness in attaining common goals.

The remaining chapters contain recommendations to the international agencies, the U. S. and Latin American governments, and to foundations and other philanthropic organizations, religious groups, universities, business firms, and trade unions. As a result of our study, we are confident that all agencies and groups in technical cooperation can make their programs more productive in sowing the seeds of progress.

V.

Recommendations on Fields of Technical Cooperation

MOST COUNTRIES OF LATIN AMERICA need more public and private programs of technical cooperation in order to expedite and achieve the necessary balance in their economic and social development; and in all countries, improvements can be made which will increase the effectiveness of programs.

The pace of technical assistance and the benefits to the participating groups could increase if each group, public or private, would engage in those particular phases of the program for which it is best suited; if each planned and conducted its programs so that, in so far as possible, they complemented and supplemented other on-going programs; and if closer working relationships between the various programs were maintained. Some phases of technical cooperation require government-to-government action, and other phases operate best on a wholly private basis. The great majority of the public technical cooperation activities have been in programs which private groups are not likely to undertake. But concurrent public and private programs are needed in a variety of fields if rapid social and economic development are to be achieved without economic imbalance and social unrest.

- For the foreseeable future, the public technical cooperation programs should be accepted as an important long-term activity of the U. S. government, the United Nations and its specialized agencies, and the Organization of American States. The public programs and those of the private groups should be improved and expanded in those fields which the host countries will support whole-heartedly.

- When it is considering new programs and projects or changes in those already underway, each technical cooperation agency should take into account present and prospective technical cooperation programs in other fields and those of other agencies, as well as programs carried on without the benefit of technical cooperation.

There has been a growing emphasis on technical cooperation in such fields as industry, mining, power development, transportation, labor, housing, and community development. Public and private programs in these additional activities are needed to help the development programs of the Latin American countries create a more immediate impact. However, there is some danger that, intent on rapid industrialization, some of the host governments may tend to overemphasize the need for technical cooperation programs to speed industrial development. Further industrial development is needed in every country. But it is important to increase greatly the number of children in school; to expand health facilities; to educate farmers out of traditional subsistence patterns into commercial, choice-making agriculture; to improve the administrative efficiency of government itself; and to increase the number of Latin Americans who are trained to carry forward social and economic development programs.

- While programs should be concentrated on each country's particular needs for social and economic development, in most countries, the fields of health, agriculture, education, and public administration should receive major attention in the public and private technical cooperation programs.
- In industry, programs in most countries should give special attention to increasing productivity in both large and small plants, to establishing research and testing laboratories, and to modernizing the methods of small firms. In labor, programs should help to improve labor governmental services, such as labor recruiting, apprentice training, and industrial safety; and to develop better labor-management relations. Cooperation in low-cost, self-help housing programs offers a fruitful field for aid in many countries.
- More use should be made in the public technical cooperation programs of contracts with qualified private groups—including engineering, research, and management firms; universities and research institutes; and appropriate nonprofit organizations—subject to careful consideration of each individual case.

Health and Sanitation Programs

The health and vitality of a people have a direct bearing on their productivity and on their ability to achieve higher standards of living. Health and sanitation programs thus are

closely related to programs in education, agriculture, industry, and public administration. Latin America has made great progress on the health front, but many distinctive problems, although recognized widely, still have not been overcome. The outstanding need relates to the rural population. In this area, sanitation and better nutrition are the foundation stones on which to build.

A large majority of the people in every Latin American country have little knowledge of the true causes of even the most common diseases or the means of preventing them. Erroneous beliefs must be overcome and many traditional habits and practices must be modified and at times discarded if health and sanitation programs are to be fully effective. Malnutrition is not only a serious cause of poor physical development and lack of working ability, it also increases susceptibility to specific diseases. Many families in every Latin American country are unable to produce or purchase enough food for a satisfactory diet, but the nutritional value of that which is available can be increased greatly through better selection, storage, preservation, and preparation.

In educating people in these fields, lectures, radio programs, and visual aids are helpful, but by themselves they will persuade only a small proportion of the people to accept new ideas and discard traditional beliefs and practices. Participation in demonstrations of disease prevention and health improvement practices is essential.

- All agencies and groups—public and private—cooperating in health and sanitation programs in Latin America should enlarge and intensify their health education programs as rapidly as possible. Health education should be included in programs of maternal and child health, nutrition, home economics, and community development. Consideration should be given to introducing instruction and demonstrations in health and sanitation in primary and secondary schools.

- Community sanitation programs should be expanded, especially in the rural areas, with emphasis on waste disposal, sanitary privies, pure water supply, insect control, and food preservation and preparation. Health education should be an integral part of these programs.

- Technical cooperation in nutrition should be expanded. Nutrition specialists should work with specialists in health, education, home economics, and agriculture in developing and carrying out educational and demonstration programs in this field.

- Health centers should be established in all areas where health and sanitation programs are underway—not just as adjuncts to hospitals. They should be staffed with doctors, dentists, nurses, and assistants who, in addition to providing medical care and treatment, are able and willing to carry on community programs in preventive medicine and health promotion, while continuing to the utmost the process of health education.

- The member countries of the Organization of American States (OAS) should contribute funds for the establishment of a number of training centers in health and education; and both public agencies and private groups should greatly expand training programs in the special field of health education.

Eradication of Malaria

Great progress has been made in Latin America and other parts of the world in using DDT and other insecticidal substances to destroy malaria-carrying mosquitoes and to reduce the incidence of malaria. Control programs are underway in some parts of nearly every Latin American country, and in a few countries malaria almost has been eradicated. But it is still one of the major causes of death and debility. Medical authorities are convinced that its complete eradication from all of Latin America is possible and practical.

- All anti-malaria technical cooperation programs, together with those carried on by Latin American governments alone, should be enlarged, intensified, and coordinated with the objective of completely eradicating this disease from all Latin American countries.

- The governments of the countries where malaria is still a serious menace should increase their expenditures markedly; the United States, World Health Organization, Pan American Sanitary Bureau, and other agencies of technical cooperation should be prepared to make corresponding increases in their contributions of personnel, supplies and equipment, and assistance in administration and operation.

Public Health Services

Every Latin American country has some government-administered health activities. Their scope, administrative organization, and effectiveness vary from country to country. In only a few cases are

there a sufficient number of qualified staff to take over programs of servicios and other technical cooperation agencies which have proved their worth. Too often, the servicios have done little to assist the host governments in establishing organizations and procedures capable of taking over projects and programs. The World Health Organization (WHO) and Pan American Sanitary Bureau (PASB) have in many instances confined their assistance to surveys and reports by foreign experts and have not given enough aid to implementing their recommendations.

- The technical cooperation agencies should cooperate more directly and concretely with host governments in expanding, upgrading, and re-directing the activities of the public health services in countries where such help is needed to enable those services to take over the administration of proved technical cooperation projects and to initiate additional programs which will benefit large groups of people.
- At the same time, the governments of host countries should intensify their own efforts to strengthen and improve public health services at the national, state, and local levels.

Industrial Hygiene

Experience has shown that productivity could be increased by programs to reduce occupational diseases and improve the health of workers in manufacturing plants, petroleum extraction and refining establishments, mines and smelters, railway systems, large-scale agricultural operations, and other industrial enterprises. Most of the Latin American governments now have divisions of industrial hygiene, but often they are preoccupied with law enforcement.

A full-scale industrial hygiene program might include not only measures to guard against occupational diseases and enforcement of sanitary practices by workers, but also installation of safe water supply and sewerage systems, mass immunization of workers (and possibly their families) against specific diseases, periodic physical examinations with medical treatment where needed, in-plant feeding programs, and general health education for all workers and their families.

- All technical cooperation agencies in health and sanitation should continue and expand industrial hygiene programs in Latin America.

Many private firms from the United States and other countries operating in Latin America directly or through subsidiaries have made programs in the field of industrial hygiene programs a significant phase of their operations.

- Private firms should continue their programs in the field of industrial hygiene and where needed, enlarge and intensify them. At the same time, they should participate wholeheartedly in public programs and, wherever possible, seek to merge private and public activities into a single integrated program.

Hospitals

The hospitals in many Latin American countries which have been built, equipped, and operated by servicios have made hospital service and medical care available to large numbers of people. The need and desire for additional hospitals are great, especially among the low income groups, but funds for their construction and operation will have to come largely from host governments and philanthropic sources.

- Hospitals which are being operated by servicios should be turned over to local authorities as soon as competent staff can be recruited and trained and the necessary funds provided. In the future, the public technical cooperation agencies, except in special cases, should confine their activities to helping local authorities plan and organize hospitals.

Water Supply and Sewage Disposal Systems

Sanitary water supply and sewage disposal systems built and maintained by the servicios have improved health conditions in some urban areas. They are needed in many additional areas. These systems are costly, and their value often is not appreciated by those whom they serve, but in the long run the costs will be repaid many times through improved health and increased productivity.

- The national, state, and municipal governments in Latin America should take steps to increase the financial resources available for building and maintaining water supply and sewage disposal systems.
- The water supply and sewage disposal systems constructed and operated by the servicios should be transferred to local authorities as promptly as possible. In the future, technical cooperation in this field should be limited largely to planning the systems, supervising their construction, and training local technicians for

operation and maintenance. Except in special cases, equipment and materials other than items needed for demonstration and education should be supplied by local authorities.

Education Programs

Nowhere is the diversity among and within Latin American countries more striking than with respect to education. However, in all, there are pressing needs for more and better primary, secondary, and vocational schools. Many children never go to school and too many of those who start drop out so soon that they do not retain the ability to read and write. Large numbers of the adults have had too little education to make them respond to or seek opportunities for improving their social and economic lot. Before these educational needs can be met more teachers will need to be trained in new educational methods, new textbooks will have to be prepared and book learning will need to be supplemented by other modern educational tools. Appropriate reading materials will need to be developed and made widely available so that when formal schooling is ended young people will be stimulated to retain and increase their reading ability. This poses problems for the institutions of higher learning. The existing ones will need to change some courses and add new ones and enroll larger numbers of students; and new institutions will have to be added.

Up to now, there have not been as large programs of technical cooperation in education as in health and agriculture. Partly, this results from the cultural sensitivity of this area; partly, because of the greater complexity of the problem of evolving new educational patterns and tools appropriate to the special Latin American needs. Education is intimately interwoven with the whole of Latin American intellectual life, and the foreigner who works with or in schools needs to understand Latin America's institutional heritage and its culture, and to enter appreciatively into Latin American life.

- In the sensitive area of education, technical cooperation programs should never seek to impose from the outside changes in deep-rooted cultural values. On the contrary, they should try to create an atmosphere favorable to changes which the people feel are necessary for progress toward a better life.

- Since the educational process is such an intimate part of a country's life, no technical cooperation employee should participate in education programs unless he can speak Spanish—or Portu-

guese, or French, if it is the national language. Each should be well acquainted with the history and thought of the country in which he serves. And he should sincerely seek to learn in the process of cooperating.

Domestic Educational Programs

In education, as in many areas of national development, we recognize that no one phase of national life is independent of the others. The speed of educational development is determined partly by fiscal considerations, partly by the supply and competence of teachers, partly by the adequacy of transport and communications. Latin American wants for education go far beyond present performance or financial capacity. In some areas, increased financial support would be forthcoming if a really effective pattern for a particular type of education should emerge. But, in any case, everything cannot be done at once; there must be priorities. These priorities in education will be, and should be, determined by the citizens of each country. However, once the direction is determined, technical cooperation programs can influence and stimulate the rapid multiplication of educational activities.

- All technical cooperation programs in education should be planned and conducted in the light of each country's plans for its own development of education. The financial requirements for wide adoption of the improvements introduced by the education programs should be considered.

Teacher Training

Qualified teachers are a key element in the improvement of education anywhere. In most countries of Latin America, too few teachers have had adequate training, especially in the rural schools. While improvement and an increase in the number of training schools for future teachers are urgent, there is an immediate need for improving the effectiveness of those teachers already in service who have had little or no formal teacher training. This can be done, as it is being done now, through workshops, summer courses, seminars, and through the training of supervisors and setting up an adequate supervisory system for an entire country.

- All teacher training programs should be accelerated, with even greater emphasis on training of rural teachers, on in-service training, and on the establishment of adequate supervisory services.

Primary Schools

Additional primary schools require additional funds, and a system of primary education cannot expand faster than financial support for it is forthcoming. If undue emphasis is placed on improving existing schools—which costs money—this ties up resources which might otherwise *finance additional schools.* In countries where only a small percentage of children receive any schooling, the greatest need is to increase the number of schools rather than the quality of only a few.

We do not mean to imply that nothing should be done to improve the quality of primary schools where the number of these is inadequate. What we stress is that attention should not be so absorbed by considerations of quality that the quantitative problem is neglected, nor should model schools require a standard of expenditure which makes the *rapid multiplication of schools too costly.* The many schools still using traditional methods of education operated by the U. S. religious groups in areas where there are few other schools testify to the importance of greater numbers rather than quality alone.

- First priority in technical cooperation programs, in areas where most children are receiving no schooling, should be given to increasing the number of schools. In areas where most children are already in school, the major emphasis should be on improving the quality of teaching.

Secondary Schools

Efforts to improve secondary schools and increase their numbers encounter the same barriers as those for primary schools—insufficient financial resources and the lack of enough trained teachers. The secondary schools also have curricula required by the government, which are based on traditional academic courses primarily designed to prepare students for entrance into universities. Relatively few secondary schools have added courses which help to prepare students for work as mechanics, carpenters, farmers, secretaries, home economists, etc. The addition of such courses often poses problems of increased teacher costs and added investment in plant and equipment.

- Bearing in mind the more urgent need for primary schools, public agencies and private groups nevertheless should increase their cooperation in helping Latin American countries in their efforts to expand secondary schools and broaden their scope to include vocational and other subjects which will better fit students to play an active part in their countries' progress and development.

Vocational Schools

In Latin American countries, the current need for skilled workers in urban occupations will continue and grow as development progresses. The demand is too great to be met by vocational schools alone, but will have to be supplemented by special courses in other schools and training centers as well as by on-the-job training. Because the United States has had considerable experience in developing vocational schools, this is a particularly fruitful field for bilateral programs of technical cooperation, and the United States is already cooperating in establishing vocational schools in Latin America. Similarly, the International Labor Organization (ILO) is cooperating in this field; the religious groups are operating vocational schools; and business firms not only are training their own workers, but offering technical instruction to others. Even so, there is still a shortage of skilled workers existing alongside a large reservoir of underemployed and unemployed labor.

- Both private groups and public agencies should continue and expand their cooperative activities in all fields of vocational education.

Adult Education

Out-of-school programs for adults—and for children who are not attending schools—are urgently needed in many areas of Latin America. Both host governments and cooperating agencies and groups recognize and are attempting to meet this need. Particularly, the United Nations Educational, Scientific and Cultural Organization (UNESCO) is attacking this problem through its fundamental education program. However, none seems yet to have found a satisfactory pattern for such programs. No pattern imposed on any country from the outside can succeed, but this seems to be a particularly appropriate field for joint endeavor in programs of technical cooperation.

- Increased imaginative experiments with out-of-school programs to increase literacy and community welfare should have high priority in the technical cooperation programs of public agencies and private groups.

Higher Education

For the future development of Latin American countries, no factor is of greater importance than the quality of its higher education.

Latin America is justly proud of the antiquity and past achievements of its universities, but this has not prevented these countries from requesting and welcoming assistance from many sources and in many forms. Yet, such institutions still have a long way to go before they can supply all the trained educators, doctors, engineers, scientists, administrators, economists, sociologists, and all the other specialists needed in their countries' drives for social and economic development.

We might point out in this connection that no type of technical cooperation can help very much in higher education until universities and other educational institutions have full-time faculties. The present practice in many countries of having most of the faculty made up of part-time professors can never be satisfactory.

- Because of the vital needs in education, which cut across all fields of endeavor, special attention in the programs of both public agencies and private groups should be given to cooperation with Latin American institutions in training more specialists to furnish the leadership for raising educational standards throughout their countries.

Agriculture Programs

The diversity of the agricultural needs in the Latin American countries as well as the sharp contrasts in patterns of agriculture within each country account for equally wide variations among the technical cooperation programs in agriculture.

The farmer living in a remote rural area—using traditional methods on a small plot of ground, with little or no formal education, and having little contact with the outside world—needs a different kind of assistance from that offered farmers on larger, more profitable farms who already have had access to new ideas and methods.

The great majority of the farmers in Latin America are of the first type. Often, these farmers lack a desire for change. To create an interest in improving their lot requires person-to-person assistance. Programs need to be so planned that an individual can work directly with the farm family to demonstrate how new methods will bring direct and continuing benefits. To change from subsistence farming to market agriculture, these farmers need help from extension services in learning about fertilizers, better seeds, insecticides, livestock and plant pests, soil conservation, crop rotation, irrigation, and implements and equipment. They need to know more about markets

and prices and have roads providing access to markets. Their families often are unaware of the rudiments of sanitation, nutrition, and medical care. They need help in acquiring safe water supply and sewage disposal systems, better housing, better diets. And to take advantage of what they learn, they need funds.

The operators of larger farms need a different kind of service. They often are already using progressive methods, but are on the lookout for new and better techniques. This group of farmers, by increasing productivity, will have the most immediate effect on their country's agricultural economy. Many of the research programs are directed to the commercial crops they raise; many of the programs for increased use of tractors and other farm machinery are designed primarily for the larger farms. And their demonstrations of new techniques are expected to lead to emulation by other farmers.

In some Latin American countries, large areas of unused land have great potential productive capacity. Several countries have started to open up new farm lands. United Nations (UN) and bilateral programs are making significant contributions to these activities. In addition, technical cooperation agencies are introducing new practices in the forest and fish industries as a further means of making better use of natural resources.

- Where programs are needed and supported by host governments, both public agencies and private groups should continue and expand their programs in agriculture, in land development, and in such related fields as forestries and fisheries.

Research

Research is basic to agricultural development. Without it, extension programs soon have nothing left to extend. Yet research is likely to be neglected because it does not get immediate results. However, experience in the technical cooperation programs has shown that results need not be long in coming, and meanwhile public appreciation of the value of research is built.

There are not enough research technicians in Latin American countries. Even so, the abilities of competent technicians in a number of countries are not being adequately utilized in agricultural research programs. Furthermore, there are graduates of agricultural colleges whose training could be supplemented by learning experimental methods in research programs. The use of additional Latin American technicians in these research programs can bring local experience to bear on problems peculiar to their own country.

- Research should be stepped up in all agricultural programs of technical cooperation in countries where research facilities are not already well developed.

- In every project of agricultural research within programs of technical cooperation, local technicians should be appointed to responsible positions, and special emphasis should be placed on apprentice training for graduates of agricultural colleges.

Extension Services

A program of extension education which goes direct to farmers is an important element in agricultural development. The results from research reach the farmer through extension education. Without such extension, research is of little value to the farmer. The location and orientation of extension activities in technical cooperation need to be governed by two considerations. One is the need for in-service training of extension agents. The other is that each country needs to make a beginning with its own domestic program of extension. It would be a disservice for technical cooperation programs of extension to overlap or duplicate domestic programs.

It is natural that the most responsive farmers should tend to monopolize an extension service. Yet there is particular need to accelerate the use of new techniques among those who initially are less responsive. They not only have to learn new methods but have to break away from traditional habits. In many cases, they have to learn to use money. Specific measures are needed to assure that sufficient attention is allotted to Indians and others with small farms. In some countries, this has been done in technical cooperation programs, but as yet programs are reaching only a small percentage of the millions of subsistence farmers who could profit from them.

- Extension service should be an integral part of every technical cooperation program in agriculture. In each country there should be from one to several regions where programs are set up to serve other parts of the country as pilot projects and as centers providing continuous and intensive in-service training for extension agents.

- Increased efforts should be made in projects of agricultural extension to find effective ways for speeding agricultural development on the smaller farms.

Home Economics

The level of rural welfare is a contributory cause, as well as a result, of rising agricultural productivity. Farm families need incentives to change. And prospects of an immediate rise in the level of living, coupled with specific knowledge of what they want next, are strong incentives. Farmers also need health and vigor if they are to become more efficient producers. Increased income alone does not lead to a commensurate rise in the level of living. The importance of using home demonstration agents in any program of extension arises from this fact.

- Much greater emphasis in all technical cooperation programs in agriculture should be placed on the use of home economists and on other projects aimed directly at improving farm family welfare.

Supervised Credit

Many farmers who can make good use of credit and extension education together are unable to make progress with either alone. Farmers with limited resources often need capital to enlarge their operations and make them more productive. In a supervised credit program, an agricultural technician helps the farmer determine how much credit is needed and how it can be used effectively. The technician then helps the farmer and the lending agency decide upon the size of the loan and the terms of repayment, and supervises the farmer's use of the funds. Without this advice and assistance many low-income farmers cannot obtain loans, nor can they increase their incomes enough to repay the loans and at the same time raise their levels of living.

- More agricultural projects should use the technique of supervised credit in conjunction with general extension education and other activities undertaken in technical cooperation programs for rural development.

Multipurpose Rural Programs

A comprehensive rural program embracing farm, home, education, health, and social organization, in many cases, will be a more effective approach than separate programs in each of these fields. This is especially true for areas where traditional practices still prevail and the people have little contact with the outside world. Such integrated

multipurpose programs are being developed in Asia and the Near East, and the necessity for a comprehensive approach to raising levels of living in rural communities has been recognized in some technical cooperation programs in Latin America. Indian communities especially are so tightly woven that only an integrated program can be fully effective. There is the fact also that some Latin American countries cannot afford a multiplicity of rural programs.

The United States is wealthy enough to support a number of specialized programs to improve its agriculture and rural life. But its usual extension methods have had only limited success on subsistence farms and in its less prosperous agricultural regions.

- More experiments should be undertaken with multipurpose programs for rural development, particularly among the farm people in the more backward areas, in preference to separate projects in different fields.

Public Administration Programs

Improvements in public administration are primary needs of most Latin American governments today. Every government develops patterns of administration which reflect the nature of the government itself and its concept of its task. At the same time, practices of public administration almost invariably lag behind changes in the concept of a government's role. And problems of public administration multiply as the functions of government increase in number and expand in size.

Latin American governments have many policies and programs to regulate and control finance, trade, and other activities. These cause a heavy drain on the supply of trained and experienced public servants. A greater number of competent officials are needed to plan and conduct programs of social and economic development. Experimentation and innovation are needed to help Latin American governments adjust their activities so that they will make the maximum contribution to long-range development.

Despite early fears that public administration was too sensitive a field for technical cooperation, successful relationships have been established. Both the UN and the United States have cooperated in a variety of public administration programs. Our research staff has not detected any significant superiority of multilateral over bilateral programs of public administraton—although, theoretically, multilateral

programs might have advantages over bilateral programs. The Organization of American States (OAS) might also consider activity in this field. Not only would such programs have the advantage of multilateralism possessed by the UN, but also there would be the additional advantages of a common language and governmental heritage.

- Both bilateral and multilateral programs in public administration should be continued and expanded wherever there is mutual agreement that they are needed and the host government actively supports such programs.

Technical cooperation in most fields, on occasion, deals with problems of administration and organization, and many servicios are effective demonstrations of good administrative practice. Technical cooperation programs in all fields may call upon public administration specialists for advice on occasion, but the basic responsibility for the administration of the servicios is borne by subject-matter specialists —in agriculture, health, or education, for example—who need continuously to be alert to the importance of good administrative practices.

- Technical cooperation programs in all fields should pay more attention to organizational structure and the demonstration of good administrative practices.

- Servicios should cooperate closely with other agencies of the host government, both to demonstrate practices and to facilitate the transfer of mature projects to wholly domestic agencies. All programs should guard against the introduction of over-elaborate administrative procedures and equipment which cannot be absorbed by the host government at a reasonably early date.

There has been some tendency in both the bilateral and multilateral public administration programs to overemphasize advanced administrative mechanics—such as personnel classification, the preparation of flow charts, and the microfilming of records. Those who work with trainees who travel to other countries for study, as well as the technicians who go to Latin America, need to adjust their work to the present requirements of Latin American countries.

- Public administration trainees should receive instruction which emphasizes the basic concepts of public administration and political science as well as the application of specialized administrative techniques.

Training Programs for Latin Americans

Lack of competent personnel is one of the factors which has retarded the growth and effectiveness of many technical cooperation programs, and prevented the governments of the host countries from adopting successful projects. The shortage of leaders, administrators, and technicians has been one of the important causes of the slow rate of economic and social development in many Latin American countries. The host governments as well as the cooperating agencies and groups have been keenly aware of this need. Training nationals of host countries has been an important activity of business firms, trade unions, foundations, as well as the public technical cooperation agencies. But there is still a great shortage of competent and dedicated workers at all levels.

- Training of leaders, administrators, and technicians of the host countries who will participate in technical cooperation programs and other phases of economic and social development should be continued by all agencies and groups and each should take advantage of the many opportunities for making these training programs more effective.

Training at Latin American Universities

Many Latin American universities still follow the classical pattern of early European universities, and are not yet organized to provide thorough instruction and training in technical subjects, public administration, and in economic and social fields.

- All technical cooperation agencies and groups should be prepared to assist the universities of Latin America in adapting their curricula and enlarging their facilities for training in the subjects and fields encompassed in technical cooperation programs.
- The governments and private groups of Latin America, as well as the technical cooperation agencies and groups, should arrange for a greatly increased number of grants to Latin Americans for study, especially at the undergraduate level, at Latin American universities which are organized and equipped to give satisfactory training in these subjects and fields.

Specialized Training Centers and Short Courses

Special training in addition to that which can be obtained at the host universities is needed for many phases of technical cooperation.

Training in practical operating problems and techniques often can be more useful and effective for employees at the intermediate level than more generalized training at an established institution of higher learning. The specialized short course is an effective device for training in subjects such as health, education, nursing, and other phases of public health and sanitation; teaching in primary and secondary schools; agricultural extension methods; and various phases of public administration. Specialized short courses have been organized for many groups coming to the United States for training under the bilateral program. But training centers and short courses organized and conducted within Latin American countries have many advantages. Usually, the cost will be less and the training more effective.

- Specialized short courses for Latin Americans within Latin America should be expanded markedly and the number of regional centers for such training should be increased.

Academic Study Abroad

Large numbers of grants continue to be made by the United States, the UN, and private groups for academic study abroad. Most are for graduate study at U. S. universities. Until Latin American universities are strengthened greatly, this is probably the most effective means of transferring the required amount of advanced technical and scientific knowledge to professional workers there. However, those who enter universities in the United States or other foreign countries are confronted with many difficulties. Many do not know the language spoken at the university well enough to understand fully the lectures which they hear or to participate fluently in classroom discussions. Many find that their previous academic training has not given them the background knowledge needed in the established courses of study in the foreign university. Study grants are usually limited to one year—or even one semester. In such short periods, many are unable to orient themselves to strange surroundings or obtain the professional knowledge they seek.

- Grants for academic study abroad should be limited largely to competent professional people who will be employed in technical cooperation or other development programs when they return to their home countries.

- In selecting persons to receive grants, more attention should be given to their academic background, their fluency in the ap-

propriate foreign language, their ability to adapt themselves to a strange institution and surroundings, the universities they will enter and the courses of study they will pursue, and the positions which they will occupy when they return home.

- Many persons who are selected for regular graduate study in the United States and other foreign countries should receive grants covering a period longer than one year.

Leaders and Policy Makers

Under the bilateral training program substantial numbers of businessmen, labor leaders, influential persons in other walks of life, and policy-making government officials, have been coming to the United States for short periods to study and observe institutions and activities in their particular fields. The primary objective is to enable them to understand the organization and operation of successful public and private institutions and agencies in the United States and to determine how they can be adapted to conditions in the trainees' home countries.

- The bilateral training program for leaders and policy makers should be continued. Other technical cooperation agencies and groups might well include such training in their programs; and some study and observation in countries in addition to the United States would be worthwhile.

- The training period for leaders and policy makers should last from three to six months. Wherever possible, the trainees—not necessarily all from the same country—should travel and study in groups. The specific activities of each group should be planned in advance; and they should have interpreters and bilingual group leaders so that instruction and discussion can be carried on in their native languages.

University Programs

The university contract, as used in the bilateral programs, is a relatively new development and a promising one. However, there has been insufficient differentiation between the two types of university contract—the contract involving university-to-university cooperation and that under which a university renders professional services in a program supervised and administered by the U. S. and host governments. It is our judgment that there has been

an excessive use of this second type of university contract. Some universities have entered into contractual arrangements in fields of activity or professions in which they do not have tested and successful experience.

Some university-to-university programs have suffered from the fact that sufficiently detailed arrangements have not been worked out before contracts were signed by cooperating universities. There has not been a clear enough understanding of just which fields are to be covered, the particular contribution to be made by each university, and how the program is to harmonize with the over-all, on-going technical cooperation program of the U. S. and host governments. University personnel should consult with and seek the advice of U. S. government officials in the host country to obtain their first-hand knowledge of conditions and their suggestions concerning the scope and content of the universities' program. But often the U. S. officials —both in the field and at headquarters—have attempted to exercise too much supervisory and administrative control over these university-to-university contracts. Some contracts have been for too short a period to permit programs to be planned and carried out which can have a lasting, beneficial effect.

- The number of university-to-university contracts and the scope of activities under them should be expanded as rapidly as the universities of the United States and Latin America can reach agreement on acceptable programs and methods of procedure which promise to produce the desired results. The United Nations and its specialized agencies and the Organization of American States should try this device—contracting not only with U. S. universities, but drawing on the experience and ability of appropriate institutions from other countries.

- Universities in the United States should give priority to inter-university cooperation when considering new contracts or the renewal of existing ones. Special weight should be given, when considering contracts for specific services in an on-going program, to the disadvantages of draining scarce talent from the home campus. For such contracts, services of private consulting or contracting firms and specialists, rather than universities, should be sought, unless the services are directly related to university activities on the home campus.

- Each university-to-university contract should be based on a precise understanding by representatives of the two universities

on the scope of the activities and their respective roles, and by consultation and negotiation with the officials of the technical cooperation program, to assure that the universities' cooperative activities complement the host country's over-all, long-range program.

- Every university considering such a contract should recognize it as an important new activity with great potentialities for the university and should develop new methods to fit special problems involved in such cooperative activities. Only well-qualified faculty members should be assigned to work with the cooperating university.

- The initial contracts should provide funds for a period long enough to enable the universities to carry out significant cooperative activities and to make plans for continuing their cooperation after the contract expires if that seems desirable.

- Achievements under this promising, but new, device will be enhanced if the universities, the public agencies, and interested private groups continuously study and appraise all phases of university participation in technical cooperation, seek out the strong and weak points, and revise programs and procedures in the light of their findings.

VI.

Recommendations on Administration of Technical Cooperation

SINCE ALL OF THE PUBLIC PROGRAMS of technical cooperation are relatively new, they constitute a new type of organized relationship between governments. It is natural, therefore, that there should have been some stumbling in getting them organized. Partly, this uncertainty has been caused by the novel nature of technical cooperation, imperfectly understood. Partly, it has resulted from conflicting concepts of the objectives these programs are intended to serve. Administrative confusion has also resulted from undertaking what, to be effective, must be a long-term activity, but doing this within prevailing patterns of one-year appropriations. Partly, the administrative vacillation has been the result of interagency competition within the U. S. government and within the United Nations (UN). The highly specialized activity of the Organization of American States (OAS) has made its administrative problem less difficult than that of the U. S. and UN programs, but it, too, has experienced some administrative confusion. And it shares with them year-to-year budgetary uncertainties.

The administrative difficulties in technical cooperation are not insurmountable. There are a number of administrative changes which experience has shown would increase the effectiveness of public programs. We consider the administration of public programs only. Each business firm, trade union, foundation, and religious group has its own criteria for the administration of its program.

Program Planning by Public Agencies in the Host Country

IT IS IMPERATIVE that public technical cooperation programs be planned in the host countries if they are to complement and support domestic programs. The host officials are intimately acquainted with their countries' needs and local points of view. The field staff of the technical cooperation agencies not only know the resources and emphases of their own agencies, but also they know, better than the headquarters staff can, the special conditions in the host country. On the other hand, it is the responsibility of

the headquarters staff to state in which fields its programs may or may not operate. And the headquarters staff is likely to be more objective in determining whether there is too much concentration in one field or on certain projects or too much fragmentation and dispersion of effort.

Perhaps because the public agencies have not clearly recognized that technical cooperation is a continuing, long-term activity, too little attention has been given to the development of adequate systems for planning programs, and for evaluating the procedures and results of programs.

- Plans for technical cooperation programs should be made within each country, with both officials of the host country and the field administrators and technicians sharing in the planning.
- The program planning in the headquarters agencies of technical cooperation should be limited to the choice of allowable fields of operation and to the wide limits within which a balance of emphases must be kept.
- Program planning should be a continuous process, not only for the initiation of new projects, but also for changes and improvements in on-going projects. In evaluating existing programs and planning new ones, the relative merits of concentrating technical cooperation activities in one area or dispersal of programs throughout the country should be weighed. In all of the programs, there should be better methods for preparing and reviewing both annual and long-range plans and for assuring that projects which are a part of the on-going technical cooperation programs are transferred to wholly domestic agencies at the earliest appropriate time.
- A terminal date should be written into the original agreement establishing each project in order to focus attention on its results and its eventual transfer to the host country.

The complexity of elements entering into program planning and the variety of agencies and devices available for technical cooperation inevitably lead to a recommendation for some form of joint consultation. In such consultations, as in all other phases of their cooperation with a sovereign government, officials of the public agencies should guard against any hint of a colonial attitude. The U. S., UN, and OAS field staff and the host government officials need to make preliminary plans for technical cooperation separately for their

own guidance, but such plans of necessity have to be flexible until there has been an opportunity for joint discussion.

It would be undesirable to set up standard joint consultative procedures to be followed in all countries. These are matters which depend upon the number, size, and type of technical cooperation programs and agencies in each country. However, it is desirable that consultation be on a sufficiently formal basis so that the field staff of the appropriate public agencies will meet regularly with host officials, with agenda covering a broad range of subjects of mutual concern to all participants. Lines of communications with private technical cooperation groups in the host country are also needed so that their views can be taken into account.

Aside from the usual benefits to be gained from a cross-fertilization of ideas among specialists with varied backgrounds and skills, the host government officials would gain some very tangible benefits. Prior discussion can often affect the form in which the host government makes a request for assistance, and may result in the proposal's more ready acceptance. Many ministers in host governments are spending much of their time with the officials of each of the agencies of technical cooperation. The opportunity to condense such discussions in meetings which are attended by responsible representatives of all the agencies will permit them to spend more time in improving the administrative procedures and programs of their ministries. The evaluation of technical cooperation projects in relation to long-range developmental programs will help to keep before each minister the problems upon which his ministry must concentrate. And, importantly, in these joint meetings all of the participants can develop better understanding of mutual problems.

- Joint consultative procedures for representatives of the United Nations, Organization of American States, and U. S. and host governments should be established in each country to assure that programs are planned so that all of the technical cooperation activities complement the country's domestic programs and are directed toward the long-range social and economic needs of the host country.

Administration by Host Governments

The dominant partner in technical cooperation always is the host country. It is the host government which eventually takes over programs and sees that the new seeds of skills

and technologies grow and flourish. Consequently, we have some suggestions to make to the host governments, which we believe will improve joint operations in technical cooperation programs.

Host Country Planning Committee

Experience to date supports the conclusion that on the side of the host government some kind of structure for planning technical cooperation programs is needed. Technical cooperation cuts across the interests and responsibilities of officials in the ministries of agriculture, education, finance, health, industry, and, in some cases, foreign affairs. But only a few Latin American countries are making efforts to coordinate the suggestions of the separate ministries for new technical cooperation projects, or to continuously consider all available information on the country's long-range development programs which would affect plans for technical cooperation.

Whatever form a planning committee or agency might take to fit a particular country's governmental structure and customs, it could provide a number of services which would make technical cooperation more effective. In addition to evaluating all of the proposals for technical cooperation projects, the host government's planning committee could serve as a channel for drawing upon the experience of the country's nongovernmental institutions—profit-making as well as nonprofit—in making technical cooperation plans. It might be an appropriate body to help expedite the transfer of projects so that new activities could be added, and to review progress in absorbing transferred projects into regular government ministries. It might offer suggestions on ways the host government could modify its own structure so that it could better handle new types of programs. And it could have a wholesome effect in stimulating experimentation and innovation and in re-evaluating the relationship of technical cooperation to developmental processes.

- Each host government should have a planning committee or agency for technical cooperation to consider and coordinate suggestions of the separate ministries for new technical cooperation projects and to review progress toward absorbing older projects into the regular domestic agencies of government.

- The host government's planning committee should be served by a small full-time staff. It should keep informed on the status

of all technical cooperation activities—whether bilateral, multilateral, or private—in the country, and should participate in the joint consultative procedures which we have proposed. The planning committee, however, should not have authority for final acceptance or rejection of proposed projects. That authority should remain with the several ministries.

Working Arrangements

In far too many cases, ministries have requested technical cooperation projects but have failed to pave the way for them. They have not provided the facilities needed by foreign technicians or assigned and prepared appropriate government officials to cooperate in the projects. Failure to do so is a drawback for all types of technical cooperation, but especially so for advisory missions and short-term projects. Field administrators can help a host government foresee what arrangements need to be made, but the host government has the basic responsibility for preparing the way.

- Each government should take greater pains to provide the complementary facilities which are required to make the contributions requested from foreign technicians productive.

Personnel

The countries of Latin America have a goodly number of highly competent men serving their governments. We have been impressed by the fact that many of these men in central ministries do not have nearly as much discretionary responsibility as they have ability. Entirely too many of them are relatively powerless links in chains of authority. They are thereby reduced to impotent bureaucracy when they could be doing creative work. We are not unaware of the historical factors which have produced this situation. At the same time, we see the waste of creative ability which results and we are confident that the governments can establish better patterns.

This need for greater authority applies even to ministers. Too many of them are bound by rigid detailed budgets and have little or no voice in the choice of personnel. Even the programs of ministries often are, to a great degree, determined by the president's office. Greater autonomy and final authority would make able ministers much more productive.

Continuity of service is as important for technical cooperation personnel in the host country as for foreign technicians. But in many

cases, positions in government ministries are not prized as opportunities for contributing to the national welfare. Political appointments, a high rate of turnover, a tradition of part-time service, and low salaries do not create a firm foundation for successful technical cooperation programs.

- Latin American governments should delegate greater authority for policy making and administration in technical cooperation programs within central governments and their ministries.
- Latin American governments should continue and accelerate moves toward more adequate remuneration and greater security of tenure for personnel within those ministries which participate in technical cooperation.

Transfer of Projects

Agencies of technical cooperation are often accused of retaining projects too long, and of failing to transfer them to host governments as soon as they could. In some cases this criticism is justified. We are convinced, however, that sometimes it is the host governments which are at fault. In some cases, they have failed to modify their own structures so that they can adequately handle the needed new types of programs which technical cooperation has developed. And in some cases, ministers prefer that projects remain in the more flexible servicios.

- More attention should be given by Latin American governments to creation of the conditions under which projects begun as technical cooperation that fill a continuing need can be successfully transferred to permanent local agencies.

Decentralization of Authority

There is clear evidence that state, provincial, and local governments could play a far more effective role in technical cooperation programs than at present. We recognize that there are political factors involved, but still are convinced that if the central governments encouraged more local initiative in technical cooperation, there would be a more rapid spread of skills and knowledge. More local responsibility for education, health, roads, rural welfare, and other technical cooperation programs would be a stimulus to more active local participation in all types of social and economic development.

- Latin American governments should delegate more authority for technical cooperation programs to states, provinces, and municipalities.

Administration of U. S. Bilateral Programs

The acute problems caused by the extraordinary instability of the organizational structure and the periodic disruption of the administrative pattern of the U. S. bilateral program for technical cooperation were stressed in two of our earlier interim reports. Recommendations to improve this situation, and our reasons for them, were made in *Organization of the United States Government for Technical Cooperation* and in *Administration of Bilateral Technical Cooperation*. Because of the need for promptly correcting administrative deficiencies on the U. S. side of bilateral programs, many of those recommendations bear reiteration.

A first and logical step was taken with the creation of the International Cooperation Administration (ICA) within the State Department; this we heartily endorse. However, it is still too early to determine what ICA's position will be in the State Department, and whether the new agency will guard against some of the dangers which reduced the effectiveness of bilateral programs in the past. It is important that this agency have semiautonomous status, that its head be given considerable latitude in making administrative decisions, and that he report directly to the Secretary of State. It is important that the agency have its own staff to carry on the specialized functions required in this new type of cooperative effort. It would be unfortunate if too much of the work were turned over to other government agencies, as it often has been in past programs. The full authority for operation of bilateral technical cooperation should be left with the ICA, although the resources of other agencies should be drawn upon for technical support when appropriate.

The ICA was given responsibility for administering economic aid as well as technical cooperation programs. This could cause continued administrative confusion if the separate purposes of each type of program were not clearly recognized and defined. Technical cooperation programs can increase the effectiveness of economic aid, but they have to be clearly distinguished from programs providing direct capital grants, loans, or materials for economic development.

For true cooperation with the host governments, field missions need operating flexibility, able personnel, and the necessary equipment and

supplies. Without broad authority for program making and execution, it will be impossible for the field staff readily and efficiently to adjust operations to the differing conditions and requirements of the many host countries. In taking our bearings on the administrative structure for bilateral cooperation, we thus start with the structure in the host country and move to the headquarters office in the United States.

An Integrated Country Staff

The results of the system of country directors and country program planning committees, envisioned in 1951, have been uneven. There are several reasons why the system has not worked effectively in some countries. There has been some confusion on the relationship of the country director to the chiefs of technical mission and the prestige of some chiefs of mission has suffered. Some country directors have not had the special qualifications needed for leadership. Misunderstandings have arisen in some instances of the roles of the technical cooperation staff and the U. S. embassy in the host country. Some technical missions have been reluctant to participate in country-wide planning, or to recognize the necessity for joint study of the allocation of resources among all programs. Experience in some countries has demonstrated that a clear recognition of these difficulties and proper precautions to avoid them can make the integrated country system work effectively. In countries where the system has not worked, the unsuccessful country directors have not been solely to blame. The position has never been as clearly defined as it should be.

- The position of country director should be clarified without further delay. The country director should take the lead in coordinating all U. S. programs in a host country. He should not direct and supervise the details of the different technical missions' programs and projects, but should relieve the missions of time-consuming administrative tasks; should work out budgetary allocations; keep in touch with the headquarters office on requests for information, personnel, and equipment; report on developments in the various projects; and maintain good working relations with officials in the U. S. embassy and host government.

- The position of chief of technical mission—like that of the country director—should be redefined to state unequivocally the necessity that he maintain a direct working relationship with the host government's operating minister with whom he must cooperate. The chief of technical mission should be given the authority

—and the accompanying prestige—to plan, negotiate, and sign project agreements with the appropriate minister of the host country.

- The country director should be subordinate to the ambassador —who is responsible for everything done in the name of the U. S. government in the country where he is serving—on all major questions of political policy. He should remain free, however, to serve as the principal executive officer of the technical cooperation program. The country director should keep the ambassador and principal embassy officers fully informed on all that goes on in the programs, but should operate under the general directions of his superiors in the International Cooperation Administration and should report directly to Washington without detailed supervision by the ambassador.

- The ambassador should acquaint the people of the host country with his wholehearted support of the technical cooperation programs. He should retain the right to halt any operation which he believes may threaten the interests of the United States until issues concerning the operation are settled locally or in Washington. On the other hand, the ambassador should not be embarrassed in the performance of his regular duties by becoming too closely involved in the kind of internal affairs of the host country with which technical cooperation programs necessarily are concerned.

- The economic counselor and embassy attachés should be consulted on projects in their fields. However, nothing should be done to create the impression that the technical cooperation program is designed to serve the short-term political and commercial policies of the U. S. government with which the embassy staff are legitimately concerned. We have considered and are opposed to suggestions that the posts of country director for technical cooperation and of economic counselor be combined in Latin America. The country director has an operating and administrative function, whereas the economic counselor is primarily concerned with gathering and reporting information.

- The system of country planning committees already developed should be retained and should be strengthened in all countries. Only U. S. technical cooperation personnel should serve on the committee since it is there that the considered position of the

U. S. government is formulated. However, one or more officers of the U. S. embassy in the host country probably should attend meetings of the committee. The committee should develop effective liaison with host country planning committees and with other technical cooperation agencies.

- Neither country directors nor chiefs of technical mission should be appointed on a political basis.

Administrative Structure in Washington

Now that ICA has semiautonomous status in a permanent department, the agency can set its administrative house in order. If the administrative structure at headquarters is to serve the purposes of technical cooperation effectively and continuously, several long-standing problems will need to be resolved. The first of these is an unsolved conflict over the extent of authority which should be delegated to the field staff as opposed to that retained in the headquarters office. Another is the inadequacy of the administrative services and technical guidance provided for the field staff. Third is the need for a mechanism to assure closer, continuing relations with the UN, the OAS, and private technical cooperation groups.

A further problem, which has given the program a misleading appearance of short-term status, lies in the fact that annual authorizations as well as annual appropriations for it are necessary.

- The basic legislation should be amended to authorize such annual appropriations as Congress may deem necessary, in order to terminate the necessity for annual reauthorizations and remove from the program the misleading appearance of short-term status.

Few observers of technical cooperation programs will deny that the delegation of broad authority to field officers is a prerequisite for effective programs. Some of the disagreement on the extent of authority to be delegated grows out of the basic fact that no headquarters office can abdicate its final responsibility for the operation of all its programs. But the greatest amount of conflict has resulted from the tendency of some headquarters staff members to concede the theory that more authority should be delegated to the field, but to deny it in practice. Too often, staff members at headquarters have become so obsessed with problems faced in Washington that they have lost sight of the impact of their instructions on the widely differing activities within the host countries.

In our opinion, the important function of the headquarters office is to provide guidance and establish standards for carrying out the broad policy directives of Congress and the Executive Branch. The ICA staff can keep informed on new technical developments and the way they have been adapted to needs in various areas of the world. The Washington staff, physically and emotionally remote from a particular project, may be able to suggest solutions to problems which the field staff and host government officials might overlook. It is up to the Washington staff, too, to assure that new country directors and chiefs of technical mission are made aware of mistakes in earlier programs which should not be repeated.

- Once broad policies are determined, the Washington staff of the International Cooperation Administration should provide guidance rather than mandatory instructions. It should define problems, describe alternatives, and delegate decision making to the field.

- The headquarters office of the International Cooperation Administration should continue to play an important role in the development and approval of broad bilateral program agreements, which have the status of formal agreements between governments. Special consideration should be given to methods of promptly reviewing and advising on all of the program plans made in the host country. However, ministers and field officers should be left free to negotiate and sign project agreements, drawn up within the confines of the provisions contained in the broad program agreement. All executed project agreements should be sent to headquarters for subsequent review to provide an opportunity for the staff to suggest changes and improvements.

The field staffs for technical cooperation need far more administrative service and technical guidance from the Washington office than they have had in the past. Country directors and chiefs of technical mission need prompt answers to questions on program and policy, budgets and expenditures, and to requests for personnel and for equipment and machinery. The replies are likely to require many clearances and consultations, and often are needed in a hurry to avoid inaction in the projects. It is important that each country director be able to deal with a single official at headquarters who knows the history of the major problems in the program and the over-all problems of the host country. At the same time, the field staff needs more technical support on a wide range of activities. In order to

provide this, the headquarters office needs technicians who are professionally competent to criticize and evaluate work in health, education, agriculture, public administration, engineering, and other fields.

- The Institute of Inter-American Affairs, which has a long operating history in technical cooperation and enjoys a good reputation in Latin America, should be continued as the regional arm for technical cooperation there.
- The Institute of Inter-America Affairs should have both country and functional divisions to provide the services required by the field staff. It would seem desirable for the officer on the country desk to receive all incoming communications and be responsible for consulting technical divisions and expediting replies.
- The technical staff should do more than answer specific questions brought to it; it should initiate program guidance documents and assist in other ways at every stage of operations. Preferably, the technicians in the Washington office of the International Cooperation Administration should have had some experience in the field.

Administration of UN Programs

Major differences exist in the structure required for administering the UN's technical assistance program and that required for the different circumstances under which the bilateral programs operate. These are not just a matter of the smaller programs and funds of the UN. The fact that eight members of the UN family—seven of them specialized agencies with regular activities similar to technical cooperation and with separate constitutions and governing bodies—are taking part in the program raises difficult administrative problems. The fact that UN programs need to take into account the views and interests of the many member nations which contribute funds for the program adds further complications.

The administrative structure which has evolved for UN technical cooperation activities is complex and no one is completely happy with it, but it works. The existing machinery, involving supervision and policy making by three UN headquarters organs and the largely independent specialized agencies, is cumbersome and unwieldy. Some would prefer that one centralized technical cooperation agency integrate and direct all of the programs. Others feel that the Expanded Technical Assistance Program (ETAP) should be ended and each

specialized agency should be free to give technical assistance in its field in its own way.

Progress has been made in replacing the miscellaneous, unrelated requests from different countries for short-term assistance with orderly procedures for coordinating and building annual programs for technical cooperation in each country. This has been done so that relative freedom of operations within the broad UN program is retained by specialized agencies. We agree with some of the administrative proposals which already have been made in UN circles. The following could be adopted without important structural changes:

- The United Nations should continue its present responsibility in connection with technical cooperation, but simplify the procedures for coordinating and supervising all of the technical cooperation programs and allocating funds for them among agencies and fields of activity.

- The Administrative Committee on Coordination—composed of the United Nations Secretary General and the directors general of each specialized agency—should supersede and itself assume the functions and responsibilities of the Technical Assistance Board. More frequent meetings of the Committee should be held to provide time for the members to give personal attention to technical cooperation problems. The Committee should be served by a competent secretariat.

- The post of the United Nations resident representative for technical cooperation should be continued, and resident representatives should be appointed in each country where the United Nations has major technical cooperation activities. All resident representatives should be appointed as special representatives of the Secretary General as a means of strengthening their position in working out a continuous consensus among the headquarters and field officers of the participating agencies.

- The role of the United Nations resident representative in relation to technical missions as well as to host governments should be clarified. The resident representative—like the country director of bilateral programs—should not come between the head of a technical mission and the host minister with whom he must cooperate.

- In countries where several United Nations agencies are operating, United Nations program planning committees should be organ-

ized under the chairmanship of the resident representative. Such committees not only should consider United Nations programs, but also should participate in the joint consultative procedures of other public agencies and the host governments and should establish channels of communication with private groups.

- The United Nations should continue and accelerate, as funds become available, its shift from purely advisory activities to the assumption of joint responsibility with the host government for the operation of technical cooperation programs.
- The headquarters staffs of the United Nations and the specialized agencies, while leaving wide latitude to field staff for experimentation, should provide more technical guidance and support for technical missions.
- The United Nations should increase its efforts to stimulate member nations to make pledges as far ahead as possible to the Expanded Technical Assistance Program.

Administration of OAS Programs

The OAS technical assistance program is small in comparison with the bilateral and UN programs, but the Latin American countries regard it as "their own." Its activities are limited almost entirely to organizing and conducting training centers in Latin America. With assured continuity, stronger administration, and additional funds it could expand and improve its training program and in addition assist member countries in development programs in sensitive fields.

- To improve administration at headquarters, the Coordinating Committee on Technical Assistance should have a full-time executive director; and the Committee—possibly reconstituted as a Technical Cooperation Board—should be given full administrative responsibility under the policy guidance of the Inter-American Economic and Social Council, for planning and supervising the program, including the approval of individual projects and the allocation of funds. The heads of all the member agencies should cooperate wholeheartedly in the work of the Committee.
- The organization and administration of training centers should be improved. More definite criteria should be developed for the

selection of trainees. Efforts should be intensified to obtain competent and dedicated instructors and technicians to plan the programs and operate the centers. Where centers are associated with universities or other institutions of higher learning, the relationships between the Organization of American States and the associated institutions should be clearly defined.

- Insofar as limited funds permit, the Organization of American States should not only enlarge its training program, but also consider giving more direct technical advice and assistance to member governments in sensitive fields such as some phases of public administration, agrarian reform and land tenure, and raising the social and economic level of the Indian population.

- All member nations of the Organization of American States should make firm pledges of contributions to the technical cooperation program for a period of years, and pay their contributions before the beginning of the year in which they are to be used.

Technical cooperation is coming of age. The number of both multilateral and bilateral programs and of the countries participating in them has markedly increased in recent years. The cooperating public agencies can no longer afford the luxury of unstable direction, administrative disorganization, and neglected personnel in technical cooperation programs. As we have indicated, the administration of public programs needs to be improved substantially. Private and public programs of technical cooperation need to be more closely correlated. We believe that some of the guidelines which have emerged as a result of our appraisal of ways to improve the administration of technical cooperation in Latin America also will be useful in increasing the efficiency of public and private programs in other parts of the world.

VII.

Policy Recommendations to Public Agencies and Private Groups

WE HAVE RECOMMENDED that technical cooperation be a continuing, long-term activity of all public agencies and private groups now active in Latin America. And we have urged that all expand and improve their programs as rapidly as arrangements mutually satisfactory to them and the host countries can be made. Many of our recommendations can be carried out by decisions taken by administrators and technicians in the public and private programs. In the final analysis, however, the success of the programs will depend on the response and support of the citizens of the Latin American countries, the United States, and other member countries of the United Nations (UN). It is they who will have to make the decisions as to whether this two-way street for exchanging knowledge and skills warrants the time, effort, and money required to achieve the aims of technical cooperation.

Special efforts have been made in our Project to get the reactions of Latin Americans to the public and private technical cooperation programs, and to discover their points of view about issues which must be settled in pursuing these programs. Many Latin Americans, so far as we can discover, believe that programs of technical cooperation are making major contributions to their technological development. For the most part, they seem to feel that these programs are "their own." At the same time, they have strong convictions about how such programs should be organized and administered. One of the most striking of their reactions is one that has concerned the Organization of American States (OAS), UN, and U. S. government, as well as the private groups.

Latin Americans believe that much greater care should be exercised in selecting technicians. They are fully aware that in too many instances they have received misfits who were not wanted or incompetents who would not be missed at home rather than persons who were both skilled technicians and sensitive individuals, able to perform the difficult task of technical cooperation. They believe that it is

unwise to transfer personnel from one country to another too frequently. Once a technician learns about conditions in one country, they believe, he should be allowed to remain there for a considerable time. Finally, they are of the opinion that the value of personnel has been sharply reduced, in some cases, because insufficient supplies and equipment are provided to make the work fully effective.

We agree with the Latin Americans who feel that the personnel problem is pressing. Our policy recommendations on personnel, therefore, are made to all technical cooperation agencies and groups before proceeding to policy recommendations to the Latin American and U.S. governments and to private groups in the United States.

Personnel Recruitment and Training

There is general agreement that the speed with which technical cooperation can be made more productive rests primarily on finding and keeping qualified personnel. Throughout this report, we have emphasized the need for training nationals of the host countries so that more of them may become proficient in economic and social development activities. The need is no less important for well-trained foreign personnel in the programs designed to help Latin American countries achieve these same ends.

Finding and keeping qualified personnel, able and willing to work with the governments and peoples of a host country in programs aimed at translating their knowledge into action, has been and continues to be a serious problem for all of the technical cooperation programs. Recruitment has been difficult and turnover high.

Public agencies and private groups engaged in technical cooperation programs and many of their employees going abroad realize that success is as dependent on the right kind of approaches and attitudes as on the quality of the employees' technical experience and skills. The chances for a mutually beneficial arrangement are poor if the employee of a public agency or private group does not arrive in the host country with these basic qualities: He needs understanding of the characteristics of the host people and appreciation of their personal values and attitudes. He needs insight into the traditions and culture of the host country, a recognition of the differences from those in his own country, and an understanding of the organization and administration of the government and the relation of the people and the country's institutions to it. Ability to speak the language of the host country is a great help.

It is important that he have knowledge of the level of economic development and of the relationships between different segments of the economy. And, finally, a prerequisite is an open mind on the particular ways by which particular problems may be solved. It is far easier to formulate and agree to these requirements than to put them into practice.

The U.S. government has taken some halting steps to strengthen and adapt short-term training programs to the needs of technical cooperation. It provides orientation and briefing programs lasting for a few weeks for employees who are about to embark for technical cooperation jobs abroad. But much of this time is devoted to general information about living abroad rather than technical cooperation as such. The U.S. universities give instruction and carry on research with respect to particular foreign countries and regions in many fields covered by technical cooperation. However, programs of study which provide adequate training for prospective technicians and administrators in technical cooperation are needed.

Even assuming that sufficient numbers of potential technical cooperation employees were well-trained, many would be discouraged by the fact that there still exist so many drawbacks to employment in these programs outside the United States. Among these are security and political clearances which require long waiting periods, temporary appointments with no career service involved, and the lack of special provisions for families where health and educational facilities are inadequate.

The UN and its specialized agencies are experiencing similar difficulties in recruitment of personnel. In one sense, these agencies have an advantage in that they can recruit technicians from any member country. There are many problems in Latin America more akin to those of Asians, Europeans, or other nationalities, than to those of the United States. Technicians from a variety of areas can be very helpful.

The UN system of concentrating its technical cooperation activities in programs requiring individual advisers—experts who require a minimum of supervision from headquarters—fits in well with the limited resources and wide responsibilities of the UN agencies. However, the concentration on short-term activities by mature and competent technicians, who take leave for special technical cooperation assignments has probably resulted in focusing too little attention on the need for personnel policies which would attract able people for the kind of long service which is as necessary in UN programs as in the bilateral and private activities. When the Expanded Technical Assist-

ance Program (ETAP) started, all of the participating agencies followed different procedures in recruiting, orienting, supervising, and paying the technicians abroad. Progress has been made in establishing uniform provisions for the entire program, but there is still no career service and there are no suitable procedures for orientation and training of technicians sent abroad.

The technicians recruited for OAS training centers also are offered only short-term assignments, and their turnover rate has been high. Part of the trouble has been caused by a formal resolution which placed the employees in the OAS technical cooperation program outside the "permanent personnel." In spite of financial stringencies and the lack of assurance of reasonable tenure for technical cooperation employees, however, OAS has managed to obtain the essential personnel for its training centers and their general caliber has been high.

The personnel problem of private groups is different from that of public agencies, but it exists for them too. They also need better facilities for more specialized training for employees who are to serve abroad in technical cooperation programs. The reservoir of trained candidates for posts in private technical cooperation programs is low—and becomes more so as the public agencies, in their search for interested and qualified personnel, increasingly drain off potential employees.

- The three public agencies and universities, foundations, and other nongovernmental groups should explore ways to cooperate in financing and operating centers for the training and orientation of prospective and newly recruited technicians. In the meantime, existing orientation and briefing programs for short-term employees should be continued and strengthened, and in-service training as well as pre-service training for longer term employees should be considered.

- The public agencies, universities, and private groups should work together to determine the scope and content of training needed to enable technicians and administrators to understand the attitudes and unique cultural patterns of the people with whom they will be associated, and to work effectively in a new environment. Consultation with representatives of universities and others in host countries would be desirable.

- In the United States, selected universities should be encouraged to develop curricula and organize courses for technical cooperation personnel. Some specialization by regions and fields of activity should be considered. It may be desirable to work out cooperative

arrangements with universities or related institutions in host countries for part of the specialists' training.

- The United States, the United Nations, and the Organization of American States should each promptly place professional and administrative personnel serving abroad in its technical cooperation programs in some form of career service. Each should develop better personnel policies generally, and should particularly encourage sustained service in one host country. The career service employees of each technical cooperation agency should be supplemented, as need arises, by noncareer specialists who could work for short periods on assignments for which they have outstanding qualifications.
- The requirement for political clearance of technical cooperation personnel in the U.S. program should be discontinued.

Policy Recommendations to Latin American Governments

The administrative improvements which we have suggested to host governments would go far in making technical cooperation serve their people more effectively. Establishment of better planning procedures for technical cooperation within each host government and continuous joint consultation with representatives of the cooperating agencies would improve the programs and help tie them to long-range social and economic development activities. Decentralization of authority within ministries and from the central governments to states, municipalities, and local governments would extend the effects of technical cooperation programs. Increased attention to improved personnel policies would permit the more rapid transfer of technical cooperation projects to wholly domestic agencies.

- *Latin American governments should welcome and vigorously support technical cooperation from public agencies and private groups in programs needed for their economic and social development. They should make determined efforts to create an environment in which this cooperation has an opportunity to succeed.*

There are other important steps which host countries need to take. Increasingly, public opinion is an important factor in national development programs. No government can move much faster than public opinion. The introduction of new ways of doing things and many of the

measures which are essential as forerunners of social and economic development are bound to be unpopular with some of the public. Only as the need for them is explained and widely publicized can these measures become politically acceptable. All media can be helpful: newspaper articles, radio broadcasts, documentary films, as well as periodic "reports to the country" by high government officials concerned with technical cooperation programs.

- Latin American governments should make increased efforts to educate the general public as to progress in and the requirements for technical cooperation.
- Latin American governments should encourage their country's private research and philanthropic institutions, business associations, and profit-making firms to participate in and support the joint technical cooperation activities.

The OAS and UN technical cooperation programs, more than the bilateral programs and those of private groups, belong to the Latin American republics, which are members of these agencies. Additional funds are needed to expand and improve the OAS and UN programs. Yet some Latin American countries are not contributing as much as they could to the programs. The United States is now contributing more than any other country to these programs and increased contributions by it alone are not the answer. The international character of these programs would be seriously undermined if the United States were to increase its percentages of the total UN and OAS funds for technical cooperation. If Latin American countries increase their contributions, then the United States can also contribute more without altering the present proportions among country contributions.

- All Latin American governments should increase their contributions to technical cooperation programs of the Organization of American States and the United Nations, and should make prompt payments of pledges.

Policy Recommendations to the U.S. Government

Our answers have already been given to two broad questions of public policy which the United States faces with respect to technical cooperation. These are: Should technical cooperation be continued? If so, for how long? We believe that it should be accepted as an important long-term activity, because the mutual

benefits from technical cooperation increase as successful programs continue in operation. At least for the foreseeable future, the United States should concentrate on strengthening technical cooperation and expanding it in countries which demonstrate initiative in planning and launching programs and stand ready to help support them wholeheartly from their own resources.

Since the U.S. bilateral programs are dependent upon recurring annual appropriations by the U.S. Congress, it is important that citizens of the United States understand these programs. Too often, in the past, technical cooperation has been ill-served by publicity in the United States which claims too much for it, or emphasizes its achievements as those of U.S. technicians alone without giving adequate credit to Latin Americans in the program. This fails both by implanting a false notion of what technical cooperation is and by causing justifiable resentment abroad. Too often, also, in presenting information to Congress and the U.S. public about technical cooperation, not enough attention has been given to the way statements prepared for purely domestic consumption will be received in the country affected. Particularly when technical cooperation was administered by the Foreign Operations Administration, U.S. publicity resulted in considerable confusion of technical cooperation with economic aid.

Technical cooperation needs to be morely widely and more accurately understood in the United States.

- Greater efforts should be made by the International Cooperation Administration to interpret technical cooperation meaningfully to the people of the United States.

Other questions of policy, which must be implemented by decisions within U.S. policy processes, are: What relative support should the United States give to bilateral and to multilateral agencies of technical cooperation? What should be the criteria for types and sizes of programs of technical cooperation?

So far, we have found little competition or duplication between bilateral and multilateral programs. We believe that the proposals we have made for program planning at the country level would make adequate provisions for cooperation in the future. Technical cooperation is an especially appropriate activity for international organizations, and the United States should continue its support of the UN and OAS programs. The U.S. contribution to the UN programs is now about 50 percent of the total, and to the OAS programs, roughly 70 percent. These amounts are small in comparison with what the United States is putting into bilateral programs.

- The United States should increase its contribution to the programs of the United Nations and the Organization of American States as rapidly as other countries increase their contributions. In addition, the United States should make its annual appropriations much earlier in the year—as Congress did in fiscal 1954—so that the international agencies will not be left in uncertainty until after their new fiscal years have begun.

There are strong reasons for continuing and increasing the size of the U.S. bilateral programs. They are free of certain administrative problems which programs of international agencies must face. Beyond this, Latin American countries need technical cooperation on a much larger scale than can possibly be provided by the international agencies with their present funds and administrative structures. Until substantial administrative improvements are made and more qualified personnel become available in bilateral programs, additional funds cannot be used with full effectiveness. As these nonfinancial limitations are overcome, we are convinced that programs can be sufficiently effective to warrant their steady and judicious expansion.

- Total U.S. appropriations for bilateral programs of technical cooperation should be increased by modest amounts at least for the foreseeable future. In allocating U.S. funds among countries, consideration should be given to such factors as the stage of development of the country, the size of its population, and its need for assistance as measured by the per capita income of its people. Special weight should be given to the responsiveness of the country and its contributions to programs already in operation and the estimated potential value of proposed new projects.

Policy Recommendations to U.S. Private Groups

The number of private groups in technical cooperation, other than religious groups and business firms, has been relatively small, but this is increasing rapidly. Not only are more activities being supported entirely by private funds, but also more public funds are being channeled through private groups. The independence of these groups and their differences of approach are among their major assets. At the same time, they have experience which can mutually benefit each other and the public programs, and all can profit from an orderly and continuing means for achieving a meeting of minds. A formal arrangement has been made by a group of non-

profit organizations and the International Cooperation Administration (ICA) for the exchange of information and development of close working relationships in technical cooperation. If this were expanded to include all interested private groups and the international agencies, each would be better able to determine the role which it can fill most effectively, to plan and launch its program, and appraise its results.

- All private groups and public agencies concerned with technical cooperation should become members of a comprehensive technical cooperation clearing house in the United States. The clearing house should be supported by foundation grants and by contributions from participating groups. It should be adequately staffed and should not be dominated by the public agencies.

Foundations play a large and constructive role in the United States, and in the countries where they operate abroad. We have been impressed in the course of this study by the excellent work which the few foundations now operating in Latin America have done. Endowed foundations, privately administered for the general welfare, can set their own policies and their own administrative procedures, without considering integration into the governmental machinery of Washington, or the necessity of getting annual appropriations, or of justifying the program to current donors. Foundations are in a position to cooperate in research programs which may require a number of years before practical results can be demonstrated. Since a foundation is generally understood to have no governmental connections in its homeland, it is insulated from any possible accusations of political intent and from current fluctuations of feeling toward the U.S. government.

The large and constructive role played by private nonprofit agencies and the endowed foundations of the United States is not generally emulated in Latin America. In only a few instances have private philanthropic and research organizations been founded. We believe that U.S. foundations are in a strong position to foster the development of such private agencies in Latin America, through various methods of cooperating with them.

- Foundations which do not now have technical cooperation programs in Latin America should seriously consider extending their operations to that region. Those which normally limit their operations to particular subject-matter fields, need not alter that specialization for Latin America, as foundation activities are needed in Latin America in many fields.

- The foundations should seek, wherever possible, to cooperate with and stimulate the development of private agencies of education, development, and social service in Latin American countries.

- Foundations should continue and expand cooperation in research in the many fields where Latin America needs more long-term research.

- The foundations should greatly expand cooperative efforts in helping to develop universities and professional and learned societies, in sponsoring periodic conferences and seminars, and in increasing the flow of scientific publications in Latin America.

- One or more foundations should consider a program using media of mass communications, particularly radio, to disseminate news about and increase public understanding of development projects all over Latin America and technical cooperation as an adjunct to economic and social development.

Latin Americans are sensitive to the activities of religious groups, but participation of such groups in programs to improve health, education, and agriculture in Latin America has its valid orientation within broader purposes. Theirs is probably the oldest continuing technical cooperation activity in Latin America, and they have made and are making significant contributions. The programs should continue to be pace-setting and pioneering. To do so, they must keep abreast of the changing social, economic, and technological situation in Latin America.

Progress in improving the programs of the religious groups would be accelerated if the workers who plan and conduct them had closer relationships with the technicians in the programs in which the United States and the international agencies are cooperating. More importantly, the local representatives of the religious groups need the help of well-trained specialists in health, education, agriculture, and community organization in planning and operating their programs.

- The religious groups which are sponsoring technical cooperation programs in Latin America *should provide adequate technical* advice and guidance in all fields to their workers in Latin America. The volume and effectiveness of such guidance might well be increased if the religious groups approached this problem jointly on a nonsectarian, nondenominational basis.

United States business firms operating in Latin America are very

large carriers of technical knowledge in fields related to commerce and industry. They have widespread continuing programs to teach new skills and techniques not only to their own workmen, supervisors, and managers, but also to local firms and individuals from whom they buy raw materials and component parts and those to whom they sell their products. The use of these skills and techniques has spread widely.

Some firms operate schools, hospitals, and health centers for their employees and their families, and carry on sanitation programs and other community activities. Such activities help attract a labor supply and increase productivity, and at the same time serve others in the community.

Effective programs of industrial hygiene to guard employees against occupational and other diseases and of industrial safety to reduce accidents and injuries have been developed by many U.S. firms and their subsidiaries.

The primary motivation in all these activities is to increase profits, but they also improve the well-being of employees and their families, and help to raise the productivity and levels of living of all the people in the surrounding areas.

- The U.S. firms and their subsidiaries in Latin America should continue and expand their activities in health and sanitation, education and training, and related fields to improve the productivity of employees and the welfare of their families. Where public programs serving their employees in these fields are underway, the business firms should participate in them, and if feasible, seek to achieve integration of the public and private activities.

In addition to these varied activities directly related to their business operations, we have been impressed by the farsighted philanthropic contributions of certain U.S. firms to schools and universities, hospitals, a variety of technical cooperation projects, and other programs which serve the public and help to speed economic and social development in general. Many of the same arguments which are valid for corporate gifts to such programs within the United States would appear to hold for companies operating in Latin America. It should be noted, however, that deductions for U.S. tax purposes are not allowed if a U.S. business firm incorporated in the United States makes contributions directly, even to charitable organizations, in Latin America. To be tax deductible, the contribution would have to be made to a nonprofit U.S. organization (which might be the firm's own foundation) to be spent abroad. Deductions for gifts by a firm incorporated in a Latin

American country, even though all or part of its capital is from the United States, depend upon the tax laws of the host country. United States business operating in Latin American countries has a large stake in increasing the technical competence and well-being of their citizens; and its reputation would be further enhanced by regular contributions to worthy institutions and programs.

> The U.S. business firms operating in Latin America should enlarge their philanthropic contributions to programs not directly related to their business activities in host countries.

The United States, the United Nations and its specialized agencies, the Organization of American States, and many private groups are working with the governments and the people of Latin America in a wide variety of technical cooperation programs. These programs have helped the drive for economic and social development and better levels of living in Latin America. They have been good for the United States and for all other participating agencies and groups. The cost of technical cooperation is low, but the returns are high. Technical cooperation should be accepted as a long-range continuing instrument of U.S. foreign policy. It should not be confused with large-scale grants and loans for economic aid, and should be kept quite separate from military assistance and short-run political and trade policy.

Current programs are not perfect. We are convinced that their yield can be materially increased. We have made many recommendations for changes and improvements in both the public and private programs. Our most important recommendations pertain to improvements in the public programs. They have all been plagued by organizational, administrative, and financial instability. The host countries have not known whether they could expect continuing cooperation. The participating agencies have been unable to recruit and retain enough well-qualified personnel to staff the programs. Similarly, in the host countries there has been a serious shortage of well-qualified men and women willing and able to help administer the joint programs. Decision making has been held too closely in the headquarters offices of the participating agencies and in the ministries of the host countries. Men and women in the field have had too little leeway in planning and administering programs. There has been too little consultation and exchange of information among the public agencies and private groups concerning their current and prospective programs.

The U.S. bilateral program is much larger than the United Nations program or that of the Organization of American States. Further, the United States contributes far more than any other country to both of the multilateral programs. Thus the United States has a real and sobering responsibility for the future of technical cooperation.

Appropriations for the public programs should be increased judiciously from year to year as the nonfinancial difficulties are overcome, and mutually acceptable programs developed. The United States should immediately improve the administration and operation of the bilateral program and offer it on a continuing basis to cooperating countries. And it should strive to improve the programs of the United Nations and the Organization of American States.

Our study was confined to Latin America and our recommendations are directed specifically toward improvements in the technical cooperation programs in Latin America. But technical cooperation has been spreading in other parts of the world. For the peoples of Asia, Africa, and the Middle East, as well as Latin America, technical cooperation can be a potent tool in their struggle for economic development and better living. We hope that our findings will strengthen technical cooperation everywhere.

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INTRODUCTION AND SOURCES

THIS APPENDIX is a summary of statistical and other factual information concerning the development and present status of technical cooperation in Latin America. Many of the statements and generalizations in the preceding pages are based on information presented here. Much of the information has been distilled from publications and unpublished records of the technical cooperation agencies of the United States, the United Nations (UN) and specialized agencies, and the Organization of American States (OAS). Many unpublished materials were obtained in numerous conferences with officials of these agencies who without exception were very willing and helpful.

The country tables, 3 through 21, have been included to give the reader pertinent facts concerning the level of economic and social development in each Latin American country, the great differences between countries, and the funds and personnel of the various public agencies engaged in technical cooperation.

Readers no doubt will discover minor discrepancies and apparent inconsistencies in the data presented in the different sections. Each agency from which information was obtained has its own classification of activities and system of record-keeping and reporting and even within an agency changes in reporting frequently occur. It was not possible to reconcile the differences in all cases.

The Committee and staff are deeply obligated to Helen W. Johnson for her untiring effort and competent work in preparing the appendix.

List of References, Tables 1 through 21

Basic Data

Population: UN *Monthly Bulletin of Statistics*, Statistical Office, UN, New York City, Nov. 1955, Table 1, pp. 1-5, except for Haiti which is found in UN *Demographic Yearbook, 1954*, New York, 1954 (6th Issue), Table 1, pp. 100-102. Note: Figures are official mid-year estimates or averages of official end-year estimates. In general, the data refer to the population within present territorial boundaries (either residing in the area or actually present there); armed forces outside the country are included wherever possible.

Annual Growth: "Congressional Presentation of Mutual Security Program for 1954" (unpublished), International Cooperation Administration, Washington, D. C.

Percent Rural: *Situacion de America Frente Al Analfabetismo, Resultados de la encuesta efectuada por la Division de Educacion*, 1955, Organizacion de los Estados Americanos, Consejo Interamericano Cultural, Union Panamericana Departamento de Asuntos Culturales, Washington 6, D. C.,

CIC—Sec., Doc. 19, 23, Mayo 1955, p. 81; Paraguay and Uruguay from "Comparative Statistics on the American Republics," *World Trade Information Service*, U. S. Dept. of Commerce, Washington, D. C., Part 3, No. 55-47, Table 1, p. 1.

Area: UN *Statistical Yearbook, 1954*, New York, 1954, Table 1, pp. 24-26.

Agricultural Land: % and acres per capita, from "Congressional Presentation," *op. cit.*

National Income: "Comparative Statistics on the American Republics," *op. cit.* Figures on per capita national income are subject to considerable error and different methods of computation. Further, the data are for different years for different countries.

Calories Available: UN *Statistical Yearbook, op. cit.*, Table 124, pp. 272-273 for following countries: Argentina, Brazil, Chile, Colombia, Cuba, Honduras, Uruguay, United States, and Venezuela; *Yearbook of Food and Agricultural Statistics, 1954*, FAO, Rome, Italy, 1955, Vol. VIII, Part 1, Table 81, p. 206, for Peru; "Congressional Presentation," *op. cit.* for Bolivia, Mexico, and Paraguay.

Literacy: "Illiteracy in the American Nations: Results of Population Censuses Taken Since 1946," Inter-American Statistical Institute, Washington, D. C. (mimeo. #2422a), January 17, 1956, for following countries: Brazil, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Haiti, Honduras, Nicaragua, Panama, and Venezuela; balance of countries from *Basic Facts and Figures*, UNESCO, Paris, France, 1954.

Infant Mortality: UN *Demographic Yearbook, op. cit.*, Table 31, pp. 590-593. Note: These rates represent number of deaths under one year of age per 1,000 live births which occurred during the same time period. In some countries, the data apply to year of registration rather than year of occurrence. In only five countries and seven overseas territories are the data stated to be complete or virtually complete. For the balance, the data are said to be affected by irregularities in registration or incomplete coverage. For detailed information on these data, see footnotes following Table 31 in the UN *Demographic Yearbook* cited above and the definition of terms on p. 33.

Inhabitants per Physician: UN *Statistical Yearbook, op. cit.*, Table 171, pp. 519-520. Most of this information is from WHO. "Physicians" are believed to include doctors in public and private institutions, as well as private practitioners, provided they have some type of official legitimation; also included for some nonself-governing territories are native doctors with a diploma of lower degree. (See p. 516 of *Statistical Yearbook* cited above.)

Road Miles: *Automobile Facts and Figures*, Automobile Manufacturers Association, Washington 6, D. C., 35th Edition, 1955, p. 26. (Source is International Road Federation; Bureau of Public Roads, and Automotive Division, Department of Commerce.) Data are for 1954. Roads are defined

as all-weather roads, passable by motor vehicles; trail mileage is not included.

Electric Power: *World Power Data, 1954, Capacity of Electric Generating Plants and Production of Electric Energy,* Bureau of Power, Federal Power Commission, Washington, June 1955, p. 2. The figures show annual electric energy production for the year 1954, based chiefly on statistics of the UN and despatches of the U. S. consular agents. Production figures include both utility and industrial where known. *World Power Data* have been published in the annual reports of the Federal Power Commission for 1952 and subsequent years.

U. S. Bilateral Program of Technical Cooperation

Source: Special reports made available by the Program Office for Latin America, Institute of Inter-American Affairs, International Cooperation Administration, Washington, D. C.

Total U.S. Contributions: Total cash contributions authorized for technical cooperation, including costs of U.S. technicians; Latin American participants in training programs; supplies, equipment, and grants to cooperative services (servicios); and contract services. These figures are on a fiscal year basis and include regional projects and those of overseas territories. Figures have been rounded.

Host Country Contributions: From reports submitted by the U.S. field missions to the Washington office, without any adjustments. Figures show total contributions in cash and kind by host governments and third parties. It is difficult to determine the accuracy of these figures. The contributions "in kind" are valued unevenly in the different countries and cash contributions are made in local currencies. In most cases the International Monetary Fund's "par-value" exchange rates were used to determine dollar values.

U. S. Technicians: Total number of full-time technical people employed by IIAA and sent to Latin American countries for work in technical cooperation. The figures include contract personnel, but do not include clerical or purely administrative personnel.

Host Country Participants in Training Programs: The great majority of the total number come to the United States for study, observation, or in-service training for periods varying from a few weeks to a full year. However, a few trainees go to other participating countries in Latin America. They are sponsored by IIAA although they may be programmed by other agencies under contract.

UN and Specialized Agencies' Expanded Technical Assistance Program

Sources for 1950-51 (First Financial Period): For UNTAA figures—*Financial Reports and Accounts for the Year Ended 31 Dec. 1951 and Report of the*

Board of Auditors, General Assembly—Official Records: 7th Session, Supplement No. 6 (A/2123), 1952, p. 30; for ILO, FAO, UNESCO, ICAO, and WHO figures—*Audit Reports Relating to Expenditure by Specialized Agencies of Technical Assistance Funds Allocated from the Special Account,* UN General Assembly, 7th Session, Fifth Committee, Agenda item 40, A/C.5/518, 25 Nov. 1952, pp. 8-9, 14-17, 23-27, 31, 36-38.

Sources for 1952: UN *Fifth Report of TAC to TAB,* Supplement No. 10, E/2433, 1953, Annex VIII, pp. 161-162 (financial contributions); Annex II, pp. 151-152 (number of experts by country of assignment); and Annex III, pp. 153-155 (fellows or scholars by nationality).

Sources for 1953: UN *Sixth Report of TAC to TAB,* Supplement No. 4, E/2566, E/TAC/REP.3, April 1954, Annex II, pp. 254-255 (financial contributions); Annex IV, pp. 257-259 (number of experts by country of assignment); and Annex V, pp. 259-261 (number of fellowships or scholarships, by nationality).

Sources for 1954: UN *Seventh Report of TAC to TAB,* Supplement No. 4, E/2714, E/TAC/REP/35, 1955, Annex II, p. 257 (financial contributions); Annex IV, pp. 260-261 (number of experts by country of assignment); and Annex V, p. 263 (number of fellows or scholars by nationality).

Note: Financial contributions represent total amounts obligated for direct project costs, in U.S. dollar equivalents. The figures are on a calendar year basis and have been rounded. The first financial period is an 18-month period including half of 1950 and all of 1951 because the UN pledging conference was not held until June 14, 1950 when calendar 1950 was already half over and the expanded program of technical assistance was just getting underway. Regional projects and those of dependent territories are included for all four financial periods.

OAS Technical Cooperation Program

Sources for 1951-53: Data on project costs from *Report of the Secretariat of the Inter-American Economic and Social Council on the Program of Technical Cooperation of the Organization of American States,* Pan American Union, Washington, D. C., Aug. 17, 1954, ESSE-Doc. 11/54, p. 78.

Sources for 1954: *Program of Technical Cooperation of the Organization of American States for the Calendar Year 1954,* Inter-American Economic and Social Council, Pan American Union, Washington, D. C., Approved Jan. 28, 1954, p. i.

Sources for 1955: Office of the Coordinating Committee for Technical Assistance, OAS, Washington, D. C.

Figures on over-all administrative costs: From Coordinating Committee on Technical Assistance.

Table I — Basic Data for Latin America, and for U. S., UN, and OAS Programs in Technical Cooperation, 1951 through 1954

Basic Data for Latin America

Population, millions (1954)	175.1	Calories per cap. per day	2,407
Annual Growth, %	2.5	Literacy, % 10 yrs. & over (1950)	55
Percent Rural (est. 1950)	58	Infant Mortality, per 1000 live births	87
Area, 1000 sq. mi.	7,900	Inhabitants per Physician	n.a.
Agricultural Land, %	24.4	Road Miles per 1000 sq. mi.	86
Agricultural Land, acres per cap.	7.1	Electric Power per cap., KWH per yr.	170
National Income per cap., $ U. S. (1950)	250[1]		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$ 5,766	$17,240	$16,344	$22,029
Total Latin American Contributions (thous.$)		16,927	31,971	46,635	46,309
Contributions to Programs in:					
Health and Sanitation	U. S.	2,758	4,745	4,286	4,385
	L. A.	14,120	18,189	28,108	26,614
Education	U. S.	1,220	2,423	1,839	2,387
	L. A.	1,156	2,499	2,999	2,939
Agriculture and Natural Resources	U. S.	1,788	7,417	5,848	9,725
	L. A.	1,651	4,086	14,071	14,920
Public Administration	U. S.	....	696	1,181	902
	L. A.	....	....	14	446
Industry, Mining, Labor	U. S.	....	218	1,725	1,502
	L. A.	....	100	1,152	749
Transportation	U. S.	....	308	363	380
	L. A.	....	....	12	154
General Community Development	U. S.	....	....	63	411
	L. A.	....	....	60	108
All Other	U. S.	....	515	....	201
	L. A.	....	7,097	219	223
Overseas Territories	U. S.	....	68	36	1,023
	L. A.	....	....	....	156
Regional Projects	U. S.	....	850	1,003	1,113
No. U. S. Technicians		*242*	*549*	*613*	*664*
No. Latin Americans in Training Programs		*437*	*774*	*741*	*954*

(more)

Table I (continued)

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated[2] (thous.$U.S. equiv.)	$1,179	$4,895	$4,616	$3,921
Obligations by Agencies:				
UNTAA	145	1,020	1,124	797[3]
ILO	42	*318*	405	315
FAO	451	715	821	848
UNESCO	*242*	1,038	471	345
ICAO	7	42	95	100
WHO	212	784	539	441
Overseas Territories	1	67	91	50
Regional Projects	79	911	1,070	1,025
No. Experts Assigned	n.a.	*460*	*423*	*379*
No. Fellows and Scholars Appointed	n.a.	*557*	*267*	*344*

OAS Technical Cooperation Program (calendar years)

	1951	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$ 389	$ 980	$1,410	$1,733
Obligations by Agencies:[4]				
Pan American Sanitary Bureau	149	186	267	313
Inter-American Statistical Institute	.....	69	172	165
Pan American Union	56	227	302	390
Pan American Institute of Geography and History	.....	18	77	143
American International Institute for the Protection of Children	.....	35	34	35
Inter-American Institute of Agricultural Sciences	136	373	486	602
Over-all Administrative Expenses	48	72	72	85
No. OAS Trainees	*51*	*521*	*515*	*985*

[1] *Estimate of over-all average per capita income.*

[2] It is estimated that the assisted countries (including overseas territories and those in regional projects) have contributed to the local costs of projects in addition to the amounts shown above, something like $7 *million annually in 1952, '53 and '54.* State Department, Office of International Administration.

[3] Includes $26,000 for WMO.

[4] The Inter-American Indian Institute has not been active in the technical cooperation program of OAS.

Table 2 — U. S., Overseas Territories and Argentina Background Facts

Basic Data for U. S.

Population, millions (1955)	165.2	Calories per cap. per day (1952)	3,120
Annual Growth, %	1.7	Literacy, % 14 yrs. & over (1947)	97
Percent Rural (1950)	36	Infant Mortality per 1000 live births (1953)	28
Area, 1000 sq. mi.	3,022	Inhabitants per Physician (1953)	770
Agricultural Land, %	57.3	Road Miles per 1000 sq. mi.	1,123
Agricultural Land, acres per cap.	6.8	Electric Power per cap., KWH per yr.	3,350
National Income per cap., $ U. S. (1954)	1,847		

Basic Data for Overseas Territories

	Pop. (1953) (thous.)	Area (thous. sq. mi.)	Agric. Land		Infant Mortality	Inhab. per Physician
			%	Acres per cap.		
Barbados	219	.2	79	.4	145.5 (1952)	3,400 (1951)
British Guiana	472	83.0	6	6.3	79.3 (1953)	3,600 (1952)
British Honduras	75	8.9	6	4.0	87.4 (1953)	4,000 (1952)
Jamaica	1,487	4.4	36	.7	75.1 (1952)	4,500 (1952)
Leeward Is.	121	.4	36	.8	90.4 (1953)	5,800 (1952)
Surinam	220	55.0	0.2	.4	45.4 (1951)	2,300 (1953)
Trinidad and Tobago	698	2.0	35	.6	69.9 (1953)	3,100 (1952)
Windward Is.	297	.8	39	.7	115.5 (1951)	5,700 (1952)

Basic Data for Argentina[1]

Population, millions (1955)	19.1	Calories per cap., per day (1951)	3,110
Annual Growth, %	1.9	Literacy, % 14 yrs. & over (1947)	86
Percent Rural (1947)	38	Infant Mortality per 1000 live births (1953)	65.2
Area, 1000 sq. mi.	1,084	Inhabitants per Physician (1952)	1,300
Agricultural Land, %	52	Road Miles per 1000 sq. mi.	82
Agricultural Land, acres per cap.	19	Electric Power per cap., KWH per yr.	307
National Income per cap., $ U. S. (1953)	358		

[1] There have been no U. S. bilateral programs of technical cooperation in Argentina except for a few training grants to Argentines. Similarly, the UN Expanded Technical Assistance Programs have been confined to training activities, primarily to fellowships and scholarships—for example, 3 in 1954. Argentina has contributed to both the UN and OAS programs of technical cooperation.

Table 3 Bolivia

Basic Country Data

Population, millions (Sept. 1954)	3.2	Calories per cap. per day	n.a.
Annual Growth, %	1.2	Literacy, % (age level, n.a.)(1943)	20
Percent Rural (1950)	66	*Infant Mortality per 1000 live* births (1951)	116.7
Area, 1000 sq. mi.	424	Inhabitants per Physician (1952)	4,000
Agricultural Land, %	.3	Road Miles per 1000 sq. mi.	22
Agricultural Land, acres per cap.	.2	Electric Power per cap., KWH per yr.	120
National Income per cap., $ U. S. (1950)	100		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$316	$1,392	$1,288	$3,060
Total Bolivian Contributions (thous. $)		826	1,532	2,413	1,580
Contributions to Programs in:					
Health and Sanitation	U. S.	196	427	354	261
	Bol.	771	868	1,219	706
Education	U. S.	120	318	289	278
	Bol.	55	264	276	281
Agriculture and Natural Resources	U. S.	......	580	496	2,453
	Bol.	......	400	918	593
Public *Administration*	U. S.	......	......	23	3
	Bol.	......	......	......	......
Industry, Mining, Labor	U. S.	......	......	83	19
	Bol.	......	......	......	......
Transportation	U. S.	......	67	43	31
	Bol.	......	......	......	......
General Community Development	U. S.	......	......	......	8
	Bol.	......	......	......	......
All Other	U. S.	......	......	......	7
	Bol.	......	......	......	......
No. U. S. Technicians		*14*	*46*	*41*	*40*
No. Bolivians in Training Programs		*20*	*29*	*44*	*52*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$25	$290	$304	$266[1]
Obligations by Agencies:				
UNTAA	13	227	249	213
ILO	....	....	28	27
FAO	....	....	....	1
UNESCO	5	40	27	25
ICAO	....	....	....	....
WHO	7	23	....	....
No. Experts Assigned	n.a.	*20*	*21*	*25*
No. Fellows and Scholars Appointed	n.a.	*27*	*26*	*24*

[1] Includes $3,000 for WMO in 1954.

Table 4 Brazil

Basic Country Data

Population, millions (1955)	58.5[1]	Calories per cap. per day (1951)	2,350
Annual Growth, %	2.4	Literacy, % 10 yrs. & over (1950)	48
Percent Rural (1950)	64	Infant Mortality per 1000 live births	n.a.
Area, 1000 sq. mi.	3,288	Inhabitants per Physician (1950)	3,000
Agricultural Land, %	6	Road Miles per 1000 sq. mi.	103
Agricultural Land, acres per cap.	2	Electric Power per cap., KWH per yr.	236
National Income per cap., $ U. S. (1953)	190[2]		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$ 667	$ 2,555	$2,967	$ 2,266
Total Brazilian Contributions (thous. $)		6,058	11,350	9,354	22,696
Contributions to Programs in:					
Health and Sanitation	U. S.	440	741	653	606
	Bra.	5,818	8,483	6,995	16,918
Education	U. S.	227	422	183	403
	Bra.	240	841	459	763
Agriculture and Natural Resources	U. S.	.....	597	672	519
	Bra.	.....	.....	1,900	4,458
Public Administration	U. S.	.....	211	695	408
	Bra.	.....	.....	.....	387
Industry, Mining, Labor	U. S.	.....	69	636	189
	Bra.	.....	50	.....	170
Transportation	U. S.	.....	.....	112	24
	Bra.	.....	.....	.....	.....
General Community Development	U. S.	.....	.....	16	45
	Bra.	.....	.....	.....	.....
All Other	U. S.	.....	515	.....	72
	Bra.	.....	1,976	.....	.....
No. U. S. Technicians		*28*	*83*	*76*	*97*
No. Brazilians in Training Programs		*115*	*176*	*195*	*166*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$106	$495	$833	$366
Obligations by Agencies:				
UNTAA	30	179	421	127
ILO	1	87	132	51
FAO	34	69	164	148
UNESCO	41	158	116	40
ICAO	....	....	....	....
WHO	....	2	....	....
No. Experts Assigned	n.a.	*36*	*52*	*30*
No. Fellows and Scholars Appointed	n.a.	*86*	*19*	*25*

[1] Excluding Indian jungle population.
[2] Preliminary estimate.

Table 5 Chile

Basic Country Data

Population, millions (1955)	6.6	*Calories per cap. per day (1951)*	2,340
Annual Growth, %	2.4	Literacy, % 10 yrs. & over (1940)	74
Percent Rural (1952)	40[1]	*Infant Mortality per 1000 live births (1953)*	114.3
Area, 1000 sq. mi.	286	Inhabitants per Physician (1951)	1,800
Agricultural Land, %	26	Road Miles, per 1000 sq. mi.	116
Agricultural Land, acres per cap.	8	Electric Power per cap., KWH per yr.	643
National Income per cap., $ U. S. (1952)	265		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$333	$1,050	$1,180	$1,410
Total Chilean Contributions (thous. $)		887	2,346	2,065	2,547
Contributions to Programs in:					
Health and Sanitation	U. S.	194	396	399	309
	Chi.	787	1,326	1,055	808
Education	U. S.	.....	33	19	.....
	Chi.	.....	.....	.....	.....
Agriculture and Natural Resources	U. S.	139	523	456	643
	Chi.	100	867	900	1,332
Public Administration	U. S.	.....	32	54	35
	Chi.	.....	.....	.....	.....
Industry, Mining, Labor	U. S.	.....	66	250	352
	Chi.	.....	50	50	317
Transportation	U. S.	.....	.....	2	3
	Chi.	.....	.....	.....	.....
General Community Development	U. S.	.....	.....	.....	64
	Chi.	.....	.....	60	90
All Other	U. S.	.....	.....	.....	4
	Chi.	.....	103	.....	.....
No. U. S. Technicians		*7*	*18*	*28*	*38*
No. Chileans in Training Programs		*29*	*39*	*65*	*103*

UN Expanded Technical Assistance Program (calendar years)

	1950–51	1952	1953	1954
Total Amount Obligated (thous. $ U.S. equiv.)	$143	$255	$222	$252
Obligations by Agencies:				
UNTAA	....	34	3	18
ILO	....	3	3	3
FAO	137	201	216	231
UNESCO	1	....	....	....
ICAO	....	3	....	....
WHO	5	14	....	....
No. Experts Assigned	n.a.	*33*	*16*	*21*
No. Fellows and Scholars Appointed	n.a.	*20*	*26*	*29*

[1] Estimate.

Table 6 Colombia

Basic Country Data

Population, millions (1955)	12.7	Calories per cap. per day (1948-49)	2,370
Annual Growth, %	2.2	Literacy, % 10 yrs. & over (1938)	56
Percent Rural (1938)	71	Infant Mortality per 1000 live births (1953)	111
Area, 1000 sq. mi.	439	Inhabitants per Physician (1952)	2,800
Agricultural Land, %	36	Road Miles per 1000 sq. mi.	24
Agricultural Land, acres per cap.	9	Electric Power per cap., KWH per yr.	97
National Income per cap., $ U. S. (1952)	228		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$ 184	$ 700	$ 870	$1,186
Total Colombian Contributions (thous. $)		1,129	2,597	2,291	2,079
Contributions to Programs in:					
Health and Sanitation	U. S.	184	352	316	228
	Col.	1,129	1,943	2,176	1,672
Education	U. S.	.....	.....	.....	.....
	Col.	.....	.....	.....	.....
Agriculture and Natural Resources	U. S.	.....	266	455	739
	Col.	.....	.....	109	383
Public Administration	U. S.	.....	.....	27	23
	Col.	.....	.....	.....	9
Industry, Mining, Labor	U. S.	.....	2	39	50
	Col.	.....	.....	3	13
Transportation	U. S.	.....	80	25	4
	Col.	.....	.....	3	1
General Community Development	U. S.	.....	.....	8	141
	Col.	.....	.....	.....	1
All Other	U. S.	.....	.....	.....	1
	Col.	.....	654	.....	.....
No. U. S. Technicians		*6*	*16*	*21*	*33*
No. Colombians in Training Programs		*15*	*47*	*33*	*60*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U.S. equiv.)	$139	$233	$164	$209
Obligations by Agencies:				
UNTAA	49	97	40	78
ILO	....	10	33	27
FAO	66	35	56	39
UNESCO	8	16	5	32
ICAO	....	....	1	2
WHO	16	75	29	31
No. Experts Assigned	n.a.	*27*	*16*	*22*
No. Fellows and Scholars Appointed	n.a.	*37*	*30*	*33*

Table 7 | **Costa Rica**

Basic Country Data

Population, millions (1955)	1.0	Calories per cap. per day	n.a.
Annual Growth, %	3.9	Literacy, % 10 yrs. & over (1950)	79
Percent Rural (1950)	67	Infant Mortality, per 1000 live births (1953)	83.3
Area, 1000 sq. mi.	20	Inhabitants per Physician (1953)	2,800
Agricultural Land, %	19	Road Miles per 1000 sq. mi.	95
Agricultural Land, acres per cap.	3	Electric Power per cap., KWH per yr.	208
National Income per cap., $ U. S. (1949)	125		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$337	$1,261	$ 734	$ 737
Total Costa Rican Contributions (thous. $)		312	885	5,116	1,059
Contributions to Programs in:					
Health and Sanitation	U. S.	101	228	201	166
	C. R.	107	301	2,915	301
Education	U. S.	.....	.....	.....	.....
	C. R.	.....	.....	.....	.....
Agriculture and Natural Resources	U. S.	236	947	470	475
	C. R.	205	584	2,201	750
Public Administration	U. S.	.....	54	30	47
	C. R.	.....	.....	.....	4
Industry, Mining, Labor	U. S.	.....	.....	6	11
	C. R.	.....	.....	.....	.....
Transportation	U. S.	.....	32	27	29
	C. R.	.....	.....	.....	4
General Community Development	U. S.	.....	.....	.....	.....
	C. R.	.....	.....	.....	.....
All Other	U. S.	.....	.....	.....	9
	C. R.	.....	.....	.....	.....
No. U. S. Technicians		*14*	*31*	*37*	*23*
No. Costa Ricans in Training Programs		*19*	*32*	*19*	*40*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$45	$187	$127	$116
Obligations by Agencies:				
UNTAA	....	2	2	10
ILO	....	5	....	....
FAO	....	22	15	14
UNESCO	13	89	58	43
ICAO	....	....	3	6
WHO	32	69	49	43
No. Experts Assigned	n.a.	*14*	*15*	*15*
No. Fellows and Scholars Appointed	n.a.	*26*	*16*	*21*

Table 8 | Cuba

Basic Country Data

Population, millions (1953)	5.8[1]	Calories per cap. per day (1948-49)	2,730
Annual Growth, %	1.9	Literacy, % 10 yrs. & over (1953)	76
Percent Rural (1943)	45	Infant Mortality per 1000 live births	n.a.
Area, 1000 sq. mi.	44	Inhabitants per Physician	n.a.
Agricultural Land, %	51	Road Miles per 1000 sq. mi.	49
Agricultural Land, acres per cap.	3	Electric Power per cap., KWH per yr.	256
National Income per cap, $ U. S. (1953)	299		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		....	$145	$202	$158
Total Cuban Contributions (thous. $)		....	60	15	360
Contributions to Programs in:					
Health and Sanitation	U. S.	....	16	....	....
	Cuba	....	....	....	....
Education	U. S.	....	....	....	6
	Cuba	....	....	....	....
Agriculture and Natural Resources	U. S.	....	124	173	96
	Cuba	....	60	15	300
Public Administration	U. S.	....	5	11	5
	Cuba	....	....	....	....
Industry, Mining, Labor	U. S.	....	....	11	40
	Cuba	....	....	....	50
Transportation	U. S.	....	....	7	6
	Cuba	....	....	....	....
General Community Development	U. S.	....	....	....	....
	Cuba	....	....	....	....
All Other	U. S.	....	....	....	5
	Cuba	....	....	....	10
No. U. S. Technicians		....	*6*	*9*	*10*
No. Cubans in Training Programs		*12*	*23*	*23*	*24*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$5	$24	$14	$24
Obligations by Agencies:				
UNTAA	1	18	12	11
ILO	....	....	2	13
FAO	....	....	....	....
UNESCO	....	....	....	....
ICAO	4	....	....	....
WHO	....	6	....	....
No. Experts Assigned	n.a.	*5*	*1*	*2*
No. Fellows and Scholars Appointed	n.a.	....	*5*	*9*

[1] Census figure.

Table 9 — Dominican Republic

Basic Country Data

Population, millions (1955)	2.4	Calories per cap. per day	n.a.
Annual Growth, %	2.4	Literacy, % 10 yrs. & over (1950)	43
Percent Rural (1950)	76	Infant Mortality per 1000 live births (1953)	74.2
Area, 1000 sq. mi.	19	Inhabitants per Physician (1951)	2,800
Agricultural Land, %	26	Road Miles per 1000 sq. mi.	110
Agricultural Land, acres per cap.	1.4	Electric Power per cap., KWH per yr.	55
National Income per cap., $ U. S. (1952)	185		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$119	$206	$268	$167
Total Dominican Republic Contributions (thous. $)		75	124	199	149
Contribution to Programs in:					
Health and Sanitation	U. S.	....	....	18	14
	D. R.	....	....	3	16
Education	U. S.	119	147	159	87
	D. R.	75	75	165	92
Agriculture and Natural Resources	U. S.	....	56	55	51
	D. R.	....	....	31	35
Public Administration	U. S.	....	3	18	10
	D. R.	....	....	....	6
Industry, Mining, Labor	U. S.	....	....	18	....
	D. R.	....	....	....	....
Transportation	U. S.	....	....	....	....
	D. R.	....	....	....	....
General Community Development	U. S.	....	....	....	....
	D. R.	....	....	....	....
All Other	U. S.	....	....	....	5
	D. R.	....	49	....	....
No. U. S. Technicians		*3*	*7*	*11*	*10*
No. Dominicans in Training Programs		....	*5*	*15*	*12*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	....	$89	$52	$44
Obligations by Agencies:				
UNTAA	....	1	6	21[1]
ILO	....	....	22	11
FAO	....	....	7	3
UNESCO	....	....	....	....
ICAO	....	....	....	....
WHO	....	88	17	9
No. Experts Assigned	n.a.	*3*	*7*	*6*
No. Fellows and Scholars Appointed	n.a.	*4*	....	*5*

[1] For WMO.

Table 10 Ecuador

Basic Country Data

Population, millions (1954)	3.6	Calories per cap. per day	n.a.
Annual Growth, %	2.7	Literacy, % 10 yrs. & over (1950)	56
Percent Rural (1950)	71	Infant Mortality per 1000 live births (1949)	115.2
Area, 1000 sq. mi.	105	Inhabitants per Physician (1953)	3,700
Agricultural Land, %	17	Road Miles per 1000 sq. mi.	45
Agricultural Land, acres per cap.	3	Electric Power per cap., KWH per yr.	42
National Income per cap., $ U. S. (1950)	98		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$ 381	$1,243	$1,046	$1,311
Total Ecuadoran Contributions (thous. $)		1,314	2,242	1,016	1,187
Contributions to Programs in:					
Health and Sanitation	U. S.	262	415	358	286
	Ecu.	1,255	597	856	868
Education	U. S.	119	248	135	180
	Ecu.	59	100	60	134
Agriculture and Natural Resources	U. S.	.....	448	390	677
	Ecu.	.....	60	100	159
Public Administration	U. S.	.....	11	25	13
	Ecu.	.....	.....	.....	.....
Industry, Mining, Labor	U. S.	.....	77	62	64
	Ecu.	.....	.....	.....	23
Transportation	U. S.	.....	44	45	75
	Ecu.	.....	.....	.....	.....
General Community Development	U. S.	.....	.....	31	11
	Ecu.	.....	.....	.....	.....
All Other	U. S.	.....	.....	.....	5
	Ecu.	.....	1,485	.....	3
No. U. S. Technicians		*16*	*35*	*36*	*43*
No. Ecuadorans in Training Programs		*19*	*46*	*27*	*48*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U.S. equiv.)	$103	$527	$348	$269
Obligations by Agencies:				
UNTAA	....	154	184	100
ILO	2	76	15	26
FAO	42	63	62	105
UNESCO	40	161	58	22
ICAO	....	....	....	2
WHO	19	73	29	14
No. Experts Assigned	n.a.	*51*	*31*	*27*
No. Fellows and Scholars Appointed	n.a.	*127*	*25*	*30*

Table 11 El Salvador

Basic Country Data

Population, millions (1954)	2.1	Calories per cap. per day	n.a.
Annual Growth, %	2.5	Literacy, % 10 yrs. & over (1950)	42
Percent Rural (1950)	64	Infant Mortality per 1000 live births (1953)	81.7
Area, 1000 sq. mi.	8	Inhabitants per Physician (1952)	6,000
Agricultural Land, %	37	Road Miles, per 1000 sq. mi.	487
Agricultural Land, acres per cap.	1.5	Electric Power per cap., KWH per yr.	79
National Income per cap., $ U. S. (1950)	175[1]		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$ 99	$425	$628	$ 514
Total El Salvadoran Contributions (thous. $)		419	945	990	1,541
Contributions to Programs in:					
Health and Sanitation	U. S.	90	149	246	174
	E. S.	419	258	874	241
Education	U. S.	9	29	32	48
	E. S.	....	....	1	87
Agriculture and Natural Resources	U. S.	....	223	186	187
	E. S.	....	....	63	1,081
Public Administration	U. S.	....	20	34	49
	E. S.	....	....	2	18
Industry, Mining, Labor	U. S.	....	4	130	14
	E. S.	....	....	50	7
Transportation	U. S.	....	....	....	.....
	E. S.	....	....	....	.....
General Community Development	U. S.	....	....	....	35
	E. S.	....	....	....	.....
All Other	U. S.	....	....	....	7
	E. S.	....	687	....	107
No. U. S. Technicians		*4*	*20*	*27*	*30*
No. El Salvadorans in Training Programs		*19*	*43*	*82*	*56*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$123	$304	$202	$151
Obligations by Agencies:				
UNTAA	51	88	10	6
ILO	6	17	11	25
FAO	9	34	21	20
UNESCO	5	52	19	18
ICAO	3	9	21	22
WHO	49	104	120	60
No. Experts Assigned	n.a.	*34*	*20*	*14*
No. Fellows and Scholars Appointed	n.a.	*22*	*8*	*18*

[1] Gross national product.

Table 12 | Guatemala

Basic Country Data

Population, millions (1954)	3.1	Calories per cap. per day	n.a.
Annual Growth, %	2.5	Literacy, % 7 yrs. & over (1950)	28
Percent Rural (1950)	68	Infant Mortality per 1000 live births (1953)	102.7
Area, 1000 sq. mi.	42	Inhabitants per Physician (1952)	5,800
Agricultural Land, %	18	Road Miles, per 1000 sq. mi.	193
Agricultural Land, acres per cap.	1.7	Electric Power per cap., KWH per yr.	30
National Income per cap., $ U. S. (1953)	183[1]		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$116	$204	$206	$187
Total Guatemalan Contributions (thous. $)		389	510	532	935
Contributions to Programs in:					
Health and Sanitation	U. S.	111	67	62	50
	Gua.	389	390	383	738
Education	U. S.	5	....	....	....
	Gua.	....	....	....	....
Agriculture and Natural Resources	U. S.	....	137	144	137
	Gua.	....	120	149	197
Public Administration	U. S.	....	....	....	....
	Gua.	....	....	....	....
Industry, Mining, Labor	U. S.	....	....	....	....
	Gua.	....	....	....	....
Transportation	U. S.	....	....	....	....
	Gua.	....	....	....	....
General Community Development	U. S.	....	....	....	....
	Gua.	....	....	....	....
All Other	U. S.	....	....	....	....
	Gua.	....	....	....	....
No. U. S. Technicians		*4*	*9*	*9*	*9*
No. Guatemalans in Training Programs		*4*	....	....	*1*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$ 35	$175	$127	$ 92
Obligations by Agencies:				
UNTAA	....	14	10	6[2]
ILO	6	47	50	31
FAO	25	15	10	1
UNESCO	4	78	56	52
ICAO	....	....	1	2
WHO	....	21	....	....
No. Experts Assigned	n.a.	*32*	*17*	*10*
No. Fellows and Scholars Appointed	n.a.	*30*	*14*	*7*

[1] Gross national product.
[2] In addition, $6,000 on a "reimbursable cost basis."

Table 13 | Haiti

Basic Country Data

Population, millions (1953)	3.2	Calories per cap. per day	n.a.
Annual Growth, %	0.8	Literacy, % 10 yrs. & over (1950)	27
Percent Rural (1950)	87	*Infant Mortality per 1000 live births*	n.a.
Area, 1000 sq. mi.	11	Inhabitants per Physician (1951)	10,000
Agricultural Land, %	16	Road Miles, per 1000 sq. mi.	182
Agricultural Land, acres per cap.	0.4	Electric Power per cap., KWH per yr.	14
National Income per cap., $ U. S. (1951-52)	65		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$469	$621	$ 545	$997
Total Haitian Contributions (thous. $)		645	746	3,437	907
Contributions to Programs in:					
Health and Sanitation	U. S.	172	279	179	478
	Hai.	255	296	1,397	503
Education	U. S.	....	....	.....	85
	Hai.	....	....	.....	77
Agriculture and Natural Resources	U. S.	297	320	331	385
	Hai.	390	428	2,030	327
Public Administration	U. S.	....	22	20	23
	Hai.	....	....	10	....
Industry, Mining, Labor	U. S.	....	....	15	4
	Hai.	....	....	.....	....
Transportation	U. S.	....	....	.....	....
	Hai.	....	....	.....	....
General Community Development	U. S.	....	....	.....	7
	Hai.	....	....	.....	....
All Other	U. S.	....	....	.....	15
	Hai.	....	22	.....	....
No. U. S. Technicians		*16*	*20*	*25*	*28*
No. Haitians in Training Programs		*9*	*18*	*34*	*40*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$81	$272	$168	$153
Obligations by Agencies:				
UNTAA	....	79	39	49[1]
ILO	2	38	51	62
FAO	21	49	51	29
UNESCO	46	89	27	8
ICAO	....	....	....	....
WHO	12	17	....	5
No. Experts Assigned	n.a.	*27*	*20*	*15*
No. Fellows and Scholars Appointed	n.a.	*60*	*13*	*16*

[1] Includes $2,000 for WMO.

Table 14 — Honduras

Basic Country Data

Population, millions (1954)	1.6	Calories per cap. per day (1950-51)	2,030
Annual Growth, %	3.4	Literacy, % 10 yrs. & over (1950)	35
Percent Rural (1950)	69	Infant Mortality per 1000 live births (1953)	59.5
Area, 1000 sq. mi.	43	Inhabitants per Physician (1951-52)	6,500
Agricultural Land, %	18	Road Miles, per 1000 sq. mi.	22
Agricultural Land, acres per cap.	5	Electric Power per cap., KWH per yr.	40
National Income, per cap., $ U. S. (1953)	155		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$232	$ 626	$ 629	$1,077
Total Honduran Contributions (thous. $)		688	1,655	1,707	1,368
Contributions to Programs in:					
Health and Sanitation	U. S.	99	158	137	272
	Hon.	514	603	847	613
Education	U. S.	43	132	149	257
	Hon.	31	142	129	173
Agriculture and Natural Resources	U. S.	90	283	283	469
	Hon.	143	428	699	560
Public Administration	U. S.	....	35	25	18
	Hon.	....	.....	2	2
Industry, Mining, Labor	U. S.	....	.....	3	.....
	Hon.	....	.....	.....	.....
Transportation	U. S.	....	18	32	56
	Hon.	....	.....	9	19
General Community Development	U. S.	....	.....	.....	.....
	Hon.	....	.....	.....	.....
All Other	U. S.	....	.....	.....	5
	Hon.	....	482	21	1
No. U. S. Technicians		*14*	*18*	*23*	*27*
No. Hondurans in Training Programs		*16*	*35*	*22*	*17*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U.S. equiv.)	$38	$58	$67	$59
Obligations by Agencies:				
UNTAA	....	....	5	....
ILO	....	....	....	....
FAO	38	47	58	59
UNESCO	....	....	....	....
ICAO	....	....	....	....
WHO	....	11	4	....
No. Experts Assigned	n.a.	*9*	*8*	*8*
No. Fellows or Scholars Appointed	n.a.	*7*	*7*	*13*

Table 15 Mexico

Basic Country Data

Population, millions (1954)	28.8	Calories per cap. per day	n.a.
Annual Growth, %	2.8	Literacy, % 10 yrs. & over (1940)	46
Percent Rural (1950)	57	Infant Mortality per 1000 live births (1953)	94.5
Area, 1000 sq. mi.	760	Inhabitants per Physician (1953)	2,400
Agricultural Land, %	57	Road Miles, per 1000 sq. mi.	154
Agricultural Land, acres per cap.	10	Electric Power per cap., KWH per yr.	218
National Income per cap., $ U. S. (1953)	210		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. *Contributions (thous. $)*		$179	$694	$ 626	$1,344
Total Mexican Contributions (thous. $)		492	585	7,437	1,111
Contributions to Programs in:					
Health and Sanitation	U. S.	179	306	279	276
	Mex.	492	386	5,794	547
Education	U. S.	....	3	.....	27
	Mex.	....	....	.....	48
Agriculture and Natural Resources	U. S.	....	334	65	519
	Mex.	....	....	594	136
Public *Administration*	U. S.	....	51	21	54
	Mex.	....	....	.....	8
Industry, Mining, Labor	U. S.	....	....	256	378
	Mex.	....	....	1,049	144
Transportation	U. S.	....	....	5	64
	Mex.	....	....	.....	128
General Community Development	U. S.	....	....	.....	19
	Mex.	....	....	.....	.....
All Other	U. S.	....	....	.....	7
	Mex.	....	199	.....	100
No. U. S. Technicians		*7*	*32*	*35*	*35*
No. Mexicans in Training Programs		*41*	*64*	*50*	*116*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$129	$488	$184	$177
Obligations by Agencies:				
UNTAA	....	24	....	12
ILO	11	1	....	....
FAO	65	115	79	68
UNESCO	40	258	37	18
ICAO	....	19	68	62
WHO	13	71	....	17
No. Experts Assigned	n.a.	*37*	*41*	*30*
No. Fellows and Scholars Appointed	n.a.	*28*	*24*	*10*

Table 16 Nicaragua

Basic Country Data

Population, millions (1954)	1.2	Calories per cap. per day	n.a.
Annual Growth, %	3.1	Literacy, % 10 yrs. & over (1950)	37
Percent Rural (1950)	65	Infant Mortality per 1000 live births (1952)	77.5
Area, 1000 sq. mi.	57	Inhabitants per Physician (1953)	2,200
Agricultural Land, %	6	Road Miles per 1000 sq. mi.	82
Agricultural Land, acres per cap.	2	Electric Power per cap., KWH per yr.	78
National Income per cap., $ U. S. (1950)	140[1]		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$156	$576	$572	$506
Total Nicaraguan Contributions (thous. $)		129	813	416	897
Contributions to Programs in:					
Health and Sanitation	U. S.	89	163	105	94
	Nic.	76	236	100	342
Education	U. S.	67	196	137	133
	Nic.	53	53	116	160
Agriculture and Natural Resources	U. S.	....	197	290	218
	Nic.	....	212	200	395
Public Administration	U. S.	....	20	14	....
	Nic.	....	....	....	....
Industry, Mining, Labor	U. S.	....	....	18	20
	Nic.	....	....	....	....
Transportation	U. S.	....	....	....	19
	Nic.	....	....	....	....
General Community Development	U. S.	....	....	8	12
	Nic.	....	....	....	....
All Other	U. S.	....	....	....	10
	Nic.	....	312	....	....
No. U. S. Technicians		*6*	*23*	*28*	*21*
No. Nicaraguans in Training Programs		*1*	*30*	*29*	*36*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$1	$35	$38	$79
Obligations by Agencies:				
UNTAA	....	3	12	31
ILO	....	....	....	....
FAO	....	7	26	39
UNESCO	....	....	....	3
ICAO	....	11	....	1
WHO	1	14	....	5
No. Experts Assigned	n.a.	*4*	*8*	*12*
No. Fellows and Scholars Appointed	n.a.	*7*	*1*	*26*

[1] Gross national product.

Table 17 Panama

Basic Country Data

Population, millions (1954)	0.9	Calories per cap. per day	n.a.
Annual Growth, %	2.6	Literacy, % 10 yrs. & over (1950)	72
Percent Rural (1950)	64	Infant Mortality per 1000 live births (1953)	52.7
Area, 1000 sq. mi.	29	Inhabitants per Physician (1950)	3,300
Agricultural Land, %	3	Road Miles per 1000 sq. mi.	49
Agricultural Land, acres per cap.	0.8	Electric Power per cap., KWH per yr.	164
National Income per cap., $ U. S. (1952)	342		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$222	$1,291	$ 657	$1,111
Total Panamanian Contributions (thous. $)		*205*	*1,294*	*1,177*	473
Contributions to Programs in:					
Health and Sanitation	U. S.	70	186	187	177
	Pan.	50	75	89	89
Education	U. S.	152	241	191	169
	Pan.	155	225	159	128
Agriculture and Natural Resources	U. S.	....	827	203	611
	Pan.	....	50	929	232
Public Administration	U. S.	....	16	29	46
	Pan.	....	.....	.....	.....
Industry, Mining, Labor	U. S.	....	.....	9	25
	Pan.	....	.....	.....	7
Transportation	U. S.	....	21	38	25
	Pan.	....	.....	.....	.....
General Community Development	U. S.	....	.....	.....	40
	Pan.	....	.....	.....	17
All Other	U. S.	....	.....	.....	18
	Pan.	....	944	.....	.....
No. U. S. Technicians		*14*	*20*	*33*	*43*
No. Panamanians in Training Programs		*15*	*41*	*28*	*37*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$5	$62	$140	$112
Obligations by Agencies:				
UNTAA	1	10	23	13
ILO	....	3	....	....
FAO	....	20	24	29
UNESCO	4	10	10	4
ICAO	....	....	1	2
WHO	....	19	82	64
No. Experts Assigned	n.a.	*12*	*10*	*11*
No. Fellows and Scholars Appointed	n.a.	*11*	*10*	*10*

Table 18 | Paraguay

Basic Country Data

Population, millions (1955)	1.6	Calories per cap. per day	n.a.
Annual Growth, %	2.3	Literacy, % 7 yrs. & over (1950)	64
Percent Rural (1950)	64	Infant Mortality per 1000 live births (1948)	75.8
Area, 1000 sq. mi.	157	Inhabitants per Physician (1950)	2,500
Agricultural Land, %	4	Road Miles per 1000 sq. mi.	29
Agricultural Land, acres per cap.	3	Electric Power per cap., KWH per yr.	39
National Income per cap., $ U. S. (1953)	68		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$593	$1,131	$1,031	$1,199
Total Paraguayan Contributions (thous. $)		765	840	3,486	769
Contributions to Programs in:					
Health and Sanitation	U. S.	131	259	213	241
	Par.	400	272	957	209
Education	U. S.	132	192	211	463
	Par.	65	99	606	168
Agriculture and Natural Resources	U. S.	330	565	474	338
	Par.	300	462	1,923	389
Public Administration	U. S.	....	92	101	102
	Par.	....	.....	.....	1
Industry, Mining, Labor	U. S.	....	.....	18	9
	Par.	....	.....	.....	.....
Transportation	U. S.	....	23	14	20
	Par.	....	.....	.....	.....
General Community Development	U. S.	....	.....	.....	.....
	Par.	....	.....	.....	.....
All Other	U. S.	....	.....	.....	26
	Par.	....	7	.....	2
No. U. S. Technicians		*31*	*45*	*43*	*37*
No. Paraguayans in Training Programs		*13*	*22*	*27*	*38*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U.S. equiv.)	$55	$229	$229	$199
Obligations by Agencies:				
UNTAA	....	37	64	41
ILO	3	12	21	....
FAO	3	29	15	34
UNESCO	....	....	....	....
ICAO	....	....	....	....
WHO	49	151	129	124
No. Experts Assigned	n.a.	*22*	*25*	*19*
No. Fellows and Scholars Appointed	n.a.	*15*	*4*	*19*

Table 19 | **Peru**

Basic Country Data

Population, millions (1955)	9.4	Calories per cap. per day (1952)	2,077
Annual Growth, %	2.9	Literacy, % 10 yrs. & over (1940)	43
Percent Rural (1940)	65	Infant Mortality per 1000 live births (1953)	114.3
Area, 1000 sq. mi.	506	Inhabitants per Physician (1952)	4,500
Agricultural Land, %	13	Road Miles per 1000 sq. mi.	44
Agricultural Land, acres per cap.	5	Electric Power per cap., KWH per yr.	141
National Income per cap., $ U. S. (1952)	117		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$1,054	$1,709	$1,624	$2,408
Total Peruvian Contributions (thous. $)		1,591	1,956	3,195	5,103
Contributions to Programs in:					
Health and Sanitation	U. S.	202	385	347	511
	Peru	705	841	927	670
Education	U. S.	227	462	334	251
	Peru	423	700	1,028	828
Agriculture and Natural Resources	U. S.	625	787	784	1,257
	Peru	463	415	1,210	3,593
Public Administration	U. S.	.....	69	20	13
	Peru	.....	.....	.....	.....
Industry, Mining, Labor	U. S.	.....	.....	134	319
	Peru	.....	.....	.....	10
Transportation	U. S.	.....	6	5	24
	Peru	.....	.....	.....	2
General Community Development	U. S.	.....	.....	.....	29
	Peru	.....	.....	.....	.....
All Other	U. S.	.....	.....	.....	4
	Peru	.....	.....	30	.....
No. U. S. Technicians		*29*	*60*	*57*	*59*
No. Peruvians in Training Programs		*40*	*53*	*63*	*74*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$63	$166	$198	$141
Obligations by Agencies:				
UNTAA	....	30	44	21
ILO	8	16	18	3
FAO	11	9	10	2
UNESCO	35	85	50	46
ICAO	....	....	....	....
WHO	9	26	76	69
No. Experts Assigned	n.a.	*24*	*21*	*12*
No. Fellows and Scholars Appointed	n.a.	*9*	*6*	*16*

Table 20 | Uruguay

Basic Country Data

Population, millions (1953)	2.5	Calories per cap. per day (1952)	2,940
Annual Growth, %	1.8	Literacy, % (age level, n.a.)(1938)	85
Percent Rural (1951)	50[1]	Infant Mortality per 1000 live births	n.a.
Area, 1000 sq. mi.	72	Inhabitants per Physician (1952)	1,100
Agricultural Land, %	86	Road Miles per 1000 sq. mi.	90
Agricultural Land, acres per cap.	17	Electric Power per cap., KWH per yr.	363
National Income per cap., $ U. S. (1949)	253		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$172	$363	$132	$144
Total Uruguayan Contributions (thous. $)		300	432	*518*[2]	*315*
Contributions to Programs in:					
Health and Sanitation	U. S.	101	111	142	131
	Uru.	250	255	250	296
Education	U. S.	....	....	....	....
	Uru.	....	....	....	....
Agriculture and Natural Resources	U. S.	71	197	*−79*[3]	*−49*[3]
	Uru.	50	....	100	....
Public Administration	U. S.	....	55	32	53
	Uru.	....	....	....	11
Industry, Mining, Labor	U. S.	....	....	37	8
	Uru.	....	....	....	8
Transportation	U. S.	....	....	....	....
	Uru.	....	....	....	....
General Community Development	U. S.	....	....	....	....
	Uru.	....	....	....	....
All Other	U. S.	....	....	....	1
	Uru.	....	177	168	....
No. U. S. Technicians		*6*	*11*	*6*	*5*
No. Uruguayans in Training Programs		*6*	*25*	*31*	*21*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	....	$23	$15	$32
Obligations by Agencies:				
UNTAA	....	23	....	4
ILO	....	....	....	....
FAO	....	....	7	14
UNESCO	....	....	8	14
ICAO	....	....	....	....
WHO	....	....	....	....
No. Experts Assigned	n.a.	....	*1*	*2*
No. Fellows and Scholars Appointed	n.a.	*14*	*10*	*7*

[1] Estimate by Foreign Agricultural Service, U. S. Dept. of Agriculture.
[2] Estimated.
[3] Note that the 1953 and 1954 figures for Agriculture are minus amounts, deducted from the other contributions to reach the totals of $132,000 and $144,000 shown above.

Table 21 Venezuela

Basic Country Data

Population, millions (1955)	5.8[1]	Calories per cap. per day (1951)	2,280
Annual Growth, %	3.0	Literacy, % 10 yrs. & over (1950)	53
Percent Rural (1950)	46	Infant Mortality per 1000 live births (1953)	67.7
Area, 1000 sq. mi.	352	Inhabitants per Physician (1953)	1,900
Agricultural Land, %	18	Road Miles per 1000 sq. mi.	30
Agricultural Land, acres per cap.	7.2	Electric Power per cap., KWH per yr.	193
National Income per cap., $ U. S. (1952)	518		

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951	1952	1953	1954
Total U. S. Contributions (thous. $)		$137	$ 130	$ 100	$ 111
Total Venezuelan Contributions (thous. $)		703	1,059	1,271[2]	1,077
Contributions to Programs in:					
Health and Sanitation	U. S.	137	107	90	111
	Ven.	703	1,059	1,271	1,077
Education	U. S.	....	.....	.....	.....
	Ven.	....	.....	.....	.....
Agriculture and Natural Resources	U. S.	....	6	.....	.....
	Ven.	....	.....	.....	.....
Public Administration	U. S.	....	.....	2	.....
	Ven.	....	.....	.....	.....
Industry, Mining, Labor	U. S.	....	.....	.....	.....
	Ven.	....	.....	.....	.....
Transportation	U. S.	....	17	8	.....
	Ven.	....	.....	.....	.....
General Community Development	U. S.	....	.....	.....	.....
	Ven.	....	.....	.....	.....
All Other	U. S.	....	.....	.....	.....
	Ven.	....	.....	.....	.....
No. U. S. Technicians		*10*	*5*	*8*	*6*
No. Venezuelans in Training Programs		*9*	*6*	*2*	*6*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	*1952*	*1953*	*1954*
Total Amount Obligated (thous. $ U. S. equiv.)	$3	$5	$23	$105
Obligations by Agencies:				
UNTAA	....	....	....	36
ILO	3	3	19	36
FAO	....	....	....	12
UNESCO	....	2	....	20
ICAO	....	....	....	1
WHO	....	....	4	....
No. Experts Assigned	n.a.	....	*5*	*11*
No. Fellows and Scholars Appointed	n.a.	*6*	*1*	*14*

[1] Excluding Indian jungle population, estimated at 56,705 in 1950.
[2] Estimated.

Table 22 **U. S. and UN Technical Cooperation Programs for Overseas or Dependent Territories 1951 through 1954**

U. S. Bilateral Technical Cooperation Program (fiscal years)

		1951[1]	1952	1953	1954
Total U. S. Contributions (thous. $)		n.a.	$68	$36	$1,023
Total Contributions of Host Countries (thous. $)		n.a.	n.a.	n.a.	156
Contributions to Programs in:					
Health and Sanitation	U. S.	....	68	....	.....
	Host	....	n.a.	....	.....
Education	U. S.	....	....	3	4
	Host	....	....	n.a.	.....
Agriculture and Natural Resources	U. S.	....	....	16	52
	Host	....	....	n.a.	.....
Public Administration	U. S.	....	....	17	.....
	Host	....	....	n.a.	.....
Industry, Mining, Labor	U. S.	....	....	....	.....
	Host	....	....	....	.....
Transportation	U. S.	....	....	....	.....
	Host	....	....	....	.....
General Community Development	U. S.	....	....	....	57
	Host	....	....	....	156[2]
All Other	U. S.	....	....	....	910[3]
	Host	....	....	....	.....
No. U. S. Technicians		n.a.	....	*2*	*16*
No. Participants in Training Programs		n.a.	....	*2*	*7*

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$1	$67	$91	$50
Obligations by Agencies:				
UNTAA	1	7	22	18
ILO	....	....	....	....
FAO	....	45	61	27
UNESCO	....	....	....	5
ICAO	....	....	....	....
WHO	....	15	8	....
No. Experts Assigned	n.a.	*11*	*11*	*7*
No. Fellows and Scholars Appointed	n.a.	*15*	*21*	*8*

[1] Data are not available for the 1951 program of the U. S. government for overseas territories.
[2] Includes contribution to cooperative servicio covering all fields of activity.
[3] Includes contract with University of Maryland for activities in various fields in British Guiana.

Table 23 | **U. S. and UN Regional Programs[1] of Technical Cooperation 1951 through 1954**

U. S. Bilateral Technical Cooperation Program (fiscal years)

	1951	1952	1953	1954
Total U. S. Contributions (thous. $)	....	$850	$1,003	$1,113
U. S. Contributions to Regional Programs[2] in:				
Health and Sanitation	....	150	184	330
Education	....	283	18	63
Agriculture and Natural Resources	....	289	368	319
Public Administration	....	22	145	106
Industry, Mining, Labor	....	33	135	137
Transportation	....	73	153	158
General Community Development	....	....	.....	.....
All Other	....	....	.....	.....
No. U. S. Technicians	*13*	*44*	*58*	*54*
No. Participants in Training Programs	*35*	*40*	.....	.....

UN Expanded Technical Assistance Program (calendar years)

	1950-51	1952	1953	1954
Total Amount Obligated (thous. $ U. S. equiv.)	$79	$911	$1,070	$1,025
Obligations by Agencies:				
UNTAA	21	281	221	298
ILO	17	410	176	234
FAO	41	185	235	152
UNESCO	....	....	182	156
ICAO	....	13	10	2
WHO	....	22	246	183
No. Experts Assigned	n.a.	*59*	*77*	*80*
No. Fellows and Scholars Appointed	n.a.	....	....	*1*

[1] Regional programs are those in various fields of activity (health, agriculture, education, etc.) located at convenient points from which technicians or experts can support or serve more than one country.

[2] The host countries usually do not make direct financial contributions to regional programs as they do to the programs being carried out in their own countries.

Table 24 **Contributions of U. S. and Host Governments to IIAA Technical Cooperation Programs in Latin America**[1]

Fiscal Year	U. S.	Host[2]	Total	U. S. %
	(million $ and percentage)			
1943	$ 8.8	$ 1.6	$10.4	84
1944	13.3	2.6	15.9	84
1945	10.6	4.7	15.3	69
1946	7.4	6.1	13.5	55
1947	6.7	7.9	14.6	46
1948	7.4	10.9	18.3	40
1949	4.0	15.1	19.1	21
1950	4.6	17.0	21.6	21
1951	5.8	16.9	22.7	25
1952	16.3	32.0	48.3	34
1953	15.3	46.6	61.9	25
1954	19.9	46.1	66.0	30
1955	25.7	54.5	80.2	32

[1] Does not include contributions to regional programs or overseas territories.
[2] See note on "Host Country Contributions," Appendix, page 140, for statement concerning the reliability of these figures.

Table 25 U. S. Contributions to IIAA Technical Cooperation Programs in Latin America, by Fields of Activity and Number of Countries Participating in Each Field[1]

(contributions million $)

Fiscal Year	Health Sanit.		Educ.		Agric. Nat. Res.		Pub. Adm.		Ind. Min. Labor		Trans.		Gen. Com. Develop.		All Other	
	Con.	*No.*	*Con.*	*No.*	*Con.*	*No.*	*Con.*	*No.*	*Con.*	*No.*	*Con.*	*No.*	*Con.*	*No.*	*Con.*	*No.*
1943......	$7.2	15	$ ..	..	$1.6	9										
1944......	10.6	18	(2)	1	2.7	9										
1945......	8.9	18	.1	8	1.6	8										
1946......	6.2	18	.5	14	.7	6										
1947......	5.3	17	.8	13	.6	4										
1948......	5.7	16	.9	12	.8	4										
1949......	2.5	14	.6	10	.9	4										
1950......	2.7	14	.8	7	1.1	4										
1951......	2.8	17	1.2	11	1.8	7										
1952......	4.8	18	2.4	12	7.4	19	$ .7	15	$ .2	5	$ .3	9	....	..	$ .5[3]	1
1953......	4.3	18	1.8	11	5.8	17	1.2	18	1.7	17	.4	13	$.1	4	....	..
1954......	4.4	18	2.4	13	9.7	17	.9	16	1.5	15	.4	13	.4	11	.2[4]	17
1955......	5.1	18	4.2	16	9.0	18	2.5	17	2.7	16	.9	16	.5	13	.8[4]	15

[1] Does not include contributions to regional programs or overseas territories.
[2] $32,000 was contributed for education.
[3] $515,000 was contributed for "General *Projects*" in Brazil.
[4] "All Other" projects in 1954 and 1955 include, for the most part, cooperative service programs that cut across several fields of activity, some training in miscellaneous fields, and projects in trade and investment, and in audio visual work.

NOTE: The U. S. budget allocations, rather than the actual expenditures during the year, are used to show the number of countries participating in each field. In a few instances, prospective 1955 activities were not inaugurated in that year or were too small to warrant description in the summary of 1955 programs given in Tables 32 through 39.

Table 26 **U. S. Contributions to IIAA Technical Cooperation Programs in Latin America,[1] by Major Cost Components, 1943 through 1955**

(million $ and percentages)

Fiscal Year	U. S. Technicians[2]		Supplies, Equipment and Grants		Trainee Costs		Local Costs		Total
1943	$1.4	15%	$ 7.4	85%					$ 8.8
1944	2.5	18	10.8	82					13.3
1945	2.4	23	8.2	77					10.6
1946	2.0	28	5.4	72					7.4
1947	2.5	38	4.2	62					6.7
1948	2.3	32	5.1	68					7.4
1949	2.4	59	1.6	41					4.0
1950	2.6	57	2.0	43					4.6
1951	2.9	50	2.9	50					5.8
1952	4.6	28	6.0	37	$2.1	13%	$3.6	22%	16.3
1953	6.5	42	5.0	33	1.8	12	2.0	13	15.3
1954	5.4	27	7.7	39	2.4	12	4.4	22	19.9
1955	8.0	31	7.5	29	4.3	17	5.9	23	25.7

[1] Does not include regional programs or overseas territories.
[2] Includes "local costs," 1943 through 1951.
NOTE: Included in th. cost components are the following items: U. S. technicians—salaries, allowances, differentials, international travel, and transportation of things; supplies, equipment and grants—grants to servicios and joint funds; trainee costs—grants to participants trained in the U. S. or a Latin American country, including expenses for tuition, travel, and subsistence as well as services of other agencies for programming (training costs for 1943 through 1951 are not included); local costs—local employees' salaries, local travel, contractual services, and other field mission expenses.

Table 27

Number of U. S. Technicians in Latin America[1] by Fields of Activity 1947 through 1954

Fiscal Year	Health Sanit.	Educ.	Agric. Nat. Res.	Pub. Adm.	Ind. Min. Labor	Trans.	Gen. Com. Develop.	Total
1947	129	49	27					205
1948	115	45	27					187
1949	117	39	37					193
1950	104	47	41					192
1951	106	69	67					242
1952	121	84	202	22	77	16	27	549
1953	166	84	240	34	58	21	10	613
1954	162	83	281	46	56	25	11	664

[1] Includes regional programs and overseas territories.

Table 28

Number of Latin American Participants in IIAA Training Programs[1] by Fields of Activity, 1944 through 1954

Fiscal Year	Health Sanit.	Educ.	Agric. Nat. Res.	IGTS[2]	Pub. Adm.	Ind. Min. Labor	Trans.	Gen. Com. Develop.	Total
1944	310	19	62						391
1945	353	22	64						439
1946	161	18	43						222
1947	131	75	4						210
1948	134	10	8						152
1949	83	75	...						158
1950	57	18	42	138					255[3]
1951	69	51	110	207					437
1952	124	125	235	290					774
1953	111	60	216	...	145	136	71	2	741
1954	129	45	196	...	148	278	123	35	954

[1] Includes regional programs and overseas territories; does not include about 2,400 trainees sponsored by the Interdepartmental Committee on Scientific and Cultural Cooperation.
[2] Industry, government, and technical services.
[3] Includes seven from Argentina (4 in Health, 1 in Agriculture, and 2 in IGTS).

Table 29 — Number of U. S. Technicians in Latin America by Country and Fields of Activity 1953 and 1954

	Health Sanit.		Educ.		Agric. Nat. Res.		Pub. Adm.		Ind. Min. Labor		Trans.		Gen. Com. Devel.		Total	
	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54
Bolivia	7	7	10	9	22	21	..	..	..	1	2	2	..	..	41	40
Brazil	24	28	11	12	18	24	5	19	18[1]	13	..	..	..	1	76	97
Chile	9	11	..	..	8	12	3	1	5	11	..	1	3	2	28	38
Colombia	10	9	..	..	7	20	1	1	2	1	..	1	1	1	21	33
Costa Rica	9	5	..	..	20	15	4	2	2	..	2	1	..	..	37	23
Cuba	..	..	..	..	7	7	..	..	2	3	..	..	..	..	9	10
Dominican Rep.	1	1	4	5	6	4	..	..	..	..	..	..	..	..	11	10
Ecuador	9	10	7	7	15	18	..	1	2	2	3	4	..	1	36	43
El Salvador	10	9	1	3	13	13	1	2	2	3	..	..	..	..	27	30
Guatemala	2	2	..	..	7	7	..	..	..	..	..	..	..	..	9	9
Haiti	7	6	..	1	16	19	1	1	..	..	..	..	1	1	25	28
Honduras	3	4	7	8	10	11	1	1	..	..	2	3	..	..	23	27
Mexico	16	15	..	1	5	7	1	1	13	11	..	..	..	..	35	35
Nicaragua	6	5	10	6	11	8	..	..	1	..	..	1	..	1	28	21
Panama	10	9	13	8	7	20	1	3	1	2	1	1	..	..	33	43
Paraguay	8	7	10	10	18	14	7	4	..	2	..	..	..	..	43	37
Peru	12	14	8	8	31	32	..	..	4	4	2	1	..	..	57	59
Uruguay	4	3	..	..	..	..	2	2	..	..	..	..	..	..	6	5
Venezuela	6	6	..	..	..	..	2	..	..	..	..	..	..	..	8	6
Regional	13	10	3	2	19	21	5	8	6	3	9	10	3[2]	..	58	54
Overseas Terr.	..	1	..	3	..	8	..	..	..	..	..	..	2	4	2	16
Total	166	162	84	83	240	281	34	46	58	56	21	25	10	11	613	664

[1] Nine in Joint Commission.
[2] Information and audio-visual specialists.

Table 30 **Number of Latin American Participants in Bilateral Training Programs, by Country and Fields of Activity, 1953 and 1954**

	Health Sanit.		Educ.		Agric. Nat. Res.		Pub. Adm.		Ind. Min. Labor		Trans.		Gen. Com. Devel.		Total	
	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54	'53	'54
Bolivia	7	10	19	6	10	9	7	5	..	8	1	13	..	1	44	52
Brazil	20	15	10	1	43	58	36	66	39	4	46	14	1	8	195	166
Chile	9	14	6	..	15	9	15	4	20	72	..	1	..	3	65	103
Colombia	6	12	..	1	14	6	9	..	2	25	2	15	..	1	33	60
Costa Rica	3	9	..	..	6	14	4	4	3	5	3	8	..	..	19	40
Cuba	..	2	..	..	11	2	5	3	3	9	4	8	..	..	23	24
Dominican Rep.	2	..	2	..	1	..	10	3	..	..	..	9	..	..	15	12
Ecuador	8	10	2	7	3	10	8	4	..	8	5	7	1	2	27	48
El Salvador	6	3	6	1	10	10	6	6	4	25	..	5	..	6	32	56
Guatemala	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
Haiti	9	9	..	2	13	10	5	4	7	6	..	9	..	..	34	40
Honduras	1	..	2	4	6	4	11	2	..	7	2	..	..	..	22	17
Mexico	6	6	..	3	23	18	4	8	15	78	2	3	..	..	50	116
Nicaragua	2	1	2	4	11	16	7	..	7	11	..	4	..	..	29	36
Panama	10	5	4	5	3	4	6	12	..	5	5	4	..	2	28	37
Paraguay	3	8	2	9	15	5	3	11	3	5	1	..	..	..	27	38
Peru	9	20	4	1	27	14	5	6	18	7	..	17	..	9	63	74
Uruguay	8	4	..	1	4	2	4	8	15	3	..	1	..	2	31	21
Venezuela	2	1	..	..	..	..	..	..	..	..	..	5	..	..	2	6
Regional	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Overseas Terr.	..	..	1	..	1	5	..	1	..	..	..	..	..	1	2	7
Total	111	129	60	45	216	196	145	148	136	278	71	123	2	35	741	954

Table 31 **Summary of ICA-Financed University Contracts in Latin America as of December 31, 1955**

Host Country and Institution	U. S. Institution	Date Signed	Duration, mos.	Field of Activity	Amount[1]
BOLIVIA					
Univ. of San Andres	Univ. of Tennessee	9/16/55	31	Public administration	$421,000
BRAZIL					
Rural Univ. of State of Minas Gerais, Vicosa	Purdue Univ.	6/17/54	50	Agriculture & home economics	218,660
Getulio Vargas Foundation	Michigan State Univ.	6/29/53	33	Business administration	193,916
CHILE					
Departamento Tecnico, Inter-Americano Cooperación Agricola	Univ. of California	12/21/54	36	Agriculture—teaching, research, extension, publications	150,000
COLOMBIA					
Instituto de Credito Territorial	Univ. of Illinois	12/29/54	24	Housing	225,000
National University	Tulane Univ.	12/ 1/55	24	Medicine—research & educational development in basic medical sciences	123,300
National University (Palmira and Medellin)	Michigan State Univ.	8/11/51	60	Agriculture & natural resources	749,813
COSTA RICA					
Ministry of Agriculture and Industries	Univ. of Florida	12/21/54	36	Agriculture—education & research	160,000
CUBA					
Ministry of Education	Univ. of Tampa	8/ 1/55	36	Vocational education	300,000
ECUADOR					
Universities of Quito and Guayaquil	Univ. of Idaho	10/17/54	36	Agriculture	420,000

(more)

MEXICO					
Institute of Technological Research, Bank of Mexico	Armour Research Foundation, Illinois Inst. of Technology	5/24/54	24	Industrial development—research in all phases of industry	90,000
El Olivar School of Mexico City	Univ. of Michigan	10/27/54	24	Vocational education	102,800
Palo Alto Laboratories of Ministry of Agriculture	Sch. of Veterinary Medicine, Univ. of Pennsylvania	10/27/54	12	Veterinary agriculture	18,000
Escuela Superior de Agriculture "Antonio Narro"	Texas Agricultural and Mechanical Col.	12/15/54	26	Agriculture	751,500
Institute of Technological Research, Bank of Mexico	Teachers Col., Columbia Univ.	1/ 7/55	36	Technical education	514,000
NICARAGUA					
Servicio Cooperative Inter-Americano de Educación Publica	Univ. of Florida	12/31/54	36	Development of curriculum & teaching materials & training of teachers for trade school	197,900
PANAMA					
Ministry of Agriculture & National Institute of Agriculture at Divisa	Univ. of Arkansas	5/17/51	62	Research, teaching, extension in agriculture & home economics	975,960
Government of the Republic of Panama	Univ. of Tennessee	9/ 7/55	31	Public administration	224,000
PERU					
National School of Engineering	Univ. of North Carolina	9/21/54	33	Public health and sanitary engineering—teaching methods, curricula, research & extension	184,277
Programa Cooperativo de Experimentación Agropecuaria	State Col. of Agriculture & Engineering, Univ. of N.C.	11/ 1/54	36	Agriculture	526,300
National School of Engineering	State Col. of Agriculture & Engineering, Univ. of N.C.	12/ 4/54	36	Textile engineering	300,000
Univ. of San Marcos	Univ. of New Hampshire	12/20/55	36	Education—training of chemists	115,800
BR. GUIANA, SURINAM & JAMAICA					
U. S. Field Missions	Univ. of Maryland	6/22/54	36	Agriculture, engineering, health, housing, community development	925,000

[1] Maximum authorized U. S. cost.

NOTE: The ICA also signed a contract with Harvard University on July 1, 1955—to last 36 months with a maximum authorized U. S. cost of $75,000—under which the University will advise and work with the U. S. field missions in Latin America on nutrition. Also, ICA signed a contract with Teachers College, Columbia University, on June 30, 1955, to provide similar services in the field of education to U. S. missions not only in Latin America but also in the Near East, South Asia, and Africa. This contract, covering 12 months, has a maximum authorized cost of $25,000.

Table 32 Summary of IIAA Technical Cooperation Programs in Health and Sanitation

Country	Servicio Established	Projects in Operation, 1955
Bolivia	1943	Hospitals and health center development, operation of health centers and mobile units, health education, sanitary engineering, division of occupational health.
Brazil	1942	Public health administration, environmental sanitation, public health nursing, industrial hygiene, hospital administration, health education, nutrition, bacteriological studies, public health dentistry, vital statistics, epidemiological investigations, social welfare, vocational rehabilitation, strengthening of state public health departments.
Chile	1943	Health education and training, industrial hygiene, rural health, biostatistics.
Colombia	1942	Anti-yaws project, health education, anti-goiter and anti-malaria projects, nurses' school direction, public health engineering, industrial hygiene, training, assistance to Colombia National University in field of medical education.
Costa Rica	1944	Environmental sanitation, model markets and slaughter houses, rural water supply and waste disposal, municipal sewerage systems, hospital improvement.
Ecuador	1943	Nurses' training, advisory service for health facilities, health education, environmental sanitation, control of specific diseases.
El Salvador	1944	Environmental sanitation, nurses' training, hospital administration, laboratory technician training, vital statistics.
Guatemala	1955[1]	Health facilities, training and education, Roosevelt Hospital training.
Haiti	1942	General health and sanitation, especially in rural areas—combined health and education project, organized in 1955, includes school and community sanitation, preventive medicine in a localized demonstration area; small-town municipal water works systems and work to increase water supply for Port-au-Prince; public health center buildings.
Honduras	1942	Nurses' training, medical social service, health centers, anti-malaria and yellow fever campaign, tuberculosis sanitorium[2] environmental sanitation, health training and education, health facilities.
Mexico	1944	Dept. of Health studies, environmental sanitation, peripheral cardio-vascular diseases study, rehabilitation of handicapped, public health service, nursing and health education, hydraulic resources and sanitary engineering consultation, audio-visual services, industrial hygiene, hospital administration, malaria eradication, dentistry consultation, cultural anthropology.
Nicaragua	1943	Environmental sanitation (mainly development of water supplies and sewage disposal system), training, hospital administration.
Panama	1943	Nursing and health education, environmental sanitation, tuberculosis detection, malaria control, hospital administration, village sewage disposal.
Paraguay	1943	Nursing and health education, tuberculosis sanitorium, central serological laboratory, farm for leper colony, hospital administration, environmental sanitation, health centers, public health nursing.
Peru	1943	Sanitary engineering instruction, medical posts, health centers, hospitals, industrial hygiene, nutrition, health education, National Institute of Hygiene;

(more)

Table 32 (continued)

Uruguay....	1943	Health centers, vital statistics, nursing and health education, environmental sanitation.
Venezuela...	1943	Consultation in rural water supply engineering, vital statistics, and industrial hygiene; nursing education, training.
Surinam.....	1954	Public health and environmental sanitation.
Br. Guiana..	[3]	Nursing and environmental sanitation.
Jamaica.....	[3]	Environmental sanitation.

[1] Had a servicio from 1942 to 1948; re-established January 1955.
[2] Responsibility for the tuberculosis sanitorium transferred to the host government on July 1, 1955.
[3] No servicio.

Table 33 Summary of IIAA Technical Cooperation Programs in Education

Country	Program Started	Servicio Established	Projects in Operation, 1955
Bolivia........	1945	1945	Indian schools, rural normal schools, industrial school development, vocational agriculture, training.
Brazil.........	1948	1948	Industrial Training Program; improvement of supervisory practices, instructional materials, teaching methods, and student personnel through selection and guidance in field of industrial education and training-within-industry program.
Costa Rica....	1944[1]	....	Vocational education.
Cuba.........	1955	....	Vocational education (San Julian Aircraft School).
Dominican Rep.	1946	1955	Vocational education, industrial arts, rural education.
Ecuador.......	1945	1945	Rural and urban education, production of teaching materials.
El Salvador....	1945	....	Vocational industrial school, vocational agricultural education, home economics education, English language education.
Guatemala....	1944[2]	1955	Rural elementary teacher training, rural normal school development, vocational agricultural education, teachers' workshop.
Haiti.........	1944	1954	Rural community demonstration schools offer in-service training for school personnel, provide technical assistance in manual arts and leadership training for rural educators, and demonstrate planning, designing, and construction of adequate school facilities.
Honduras.....	1944	1944	Rural elementary teacher training, rural normal school development, vocational agricultural education, education in crafts and trades, administration, vocational education center.
Mexico........	1952	....	Operators and Mechanics School (University of Michigan contract), Survey of Technical and Higher Education (Columbia Teachers College contract), nuclear science and reactor participant training (Monterrey Institute of Technology), education in construction materials testing.

(more)

Table 33 (continued)

Country	Program Started	Servicio Established	Projects in Operation, 1955
Nicaragua	1944	1951	Vocational education (University of Florida contract), rural education, training of personnel.
Panama	1946	1946	Vocational agriculture, industrial arts, teacher training, school supervision, preparation of teaching materials.
Paraguay	1945	1945	Vocational education, elementary teacher education directed toward reorganization of school system to improve basic education and more adequately to meet the real educational needs of the rural population.
Peru	1945	1945	Rural elementary and normal and vocational school education, production of teaching materials.
Surinam	1954	1954	Vocational education.
Jamaica	1955	....	Vocational agricultural education.

[1] 1944-48; resumed in 1955.
[2] 1944-49; resumed late in 1955.

Table 34 Summary of IIAA Technical Cooperation Programs in Agriculture and Natural Resources

Country	Program Started	Servicio Established	Projects in Operation, 1955
Bolivia	1952	1952	Research, extension, supervised credit, reimbursable facilities and services.
Brazil	1943	1953	Rubber development, cacao production, extension, home economics, soil conservation, irrigation, agriculture and veterinary colleges, crop storage, food processing and marketing techniques, improvement in dairy and pasture practices and in agricultural vocational education.
Chile	1951	1951	Livestock, biological control, soil conservation, forage seed production, agricultural economics, extension-area development, water utilization, reforestation, water conservation.
Colombia	1952	1952	Studies and economic planning, extension, training; agricultural machinery operation and maintenance (short courses), machinery rehabilitation and pools (contractual operations and schools); cacao, forestry, and rubber development.
Costa Rica	1943	1948	Research, extension, livestock and crop experiment station, water resources investigation, rural engineering, cacao and coffee development, seed production and distribution, fruit production, livestock and forage, forestry development, farm mechanization.
Cuba	1952	....	Cooperative Agricultural Commission.[1] Planning and programming for diversification of agriculture,

(more)

Table 34 (continued)

			to include coffee, cacao, bananas, and other fruit and vegetable culture, pasture and livestock, improvement of fiber crops, de-emphasis on kenaf.
Dominican Rep.	1952	1955	Demonstration agronomy, extension service, livestock development, soils utilization.
Ecuador.......	1952	1952	Research, extension, livestock development, agricultural machinery.
El Salvador....	1943	1954	Animal husbandry, livestock improvement, assistance to Coffee Research Institute, basic food crop research, crop protection, soils and irrigation, extension and education, fisheries, and training.
Guatemala....	1942	1955	Animal husbandry, basic food crops, coffee, rubber, cacao, agricultural chemistry, crop protection, soils and irrigation, extension and education, rural development, training.
Haiti.........	1945	1948[2]	Technical aid in rubber, coffee, and cacao; development of Artibonite Valley; demonstrations in land preparation for irrigation and establishment of demonstration farms.
Honduras.....	1943	1943	Animal husbandry, basic food crops, soils and irrigation, crop protection, extension and education, crops and livestock development, land and water resources.
Mexico........	1952	....	Research in cattle diseases, saline soils, field crops, advice on curricula and teaching methods in vocational agriculture, agricultural chemistry, tropical forestry course, crop and livestock development, agricultural extension and education, agricultural area development in State of Coahuila.
Nicaragua.....	1943	1953	Research, extension, training, assistance to Nicaraguan Agricultural School.
Panama.......	1943	1952	Land-use studies, crop and livestock development, agricultural surveys, pasture development, administrative support and training; economic development—agricultural processing and marketing.
Paraguay......	1943	1943	Agricultural economics, crop development, extension, livestock development, forestry.
Peru..........	1943	1943	Agricultural economics and engineering, reimbursable facilities for farmers, extension farm machinery, area development in Montaro Valley, research, fisheries.
Uruguay......	1951	....	Training. (No U. S. technicians at present.)
Surinam.......	1954	1954	Agricultural extension, horticulture, and home economics.
Br. Guiana....	1954	....	Agricultural extension, soils, animal husbandry, reclamation (University of Maryland contract).
Jamaica.......	1955	....	Agricultural extension and credit.
Br. Honduras..	1955	....	Agricultural extension and agronomy.

[1] To comply with Cuban law, a Commission was set up instead of a servicio. It has no joint or comingled funds; Cuba contributes in kind only. It is a formal organization in the Ministry of Agriculture and includes members from the Cuban Bank for Agricultural and Industrial Development.

[2] Servicio terminated in December 1955.

Table 35 **Summary of IIAA Technical Cooperation Programs in Public Administration**

Country	Program Started	Non-servicio Projects in Operation, 1955
Bolivia	1953	Training center for improvement of civil service system.
Brazil	1952	Personnel administration surveys (São Paulo), School of Business Administration (São Paulo), regional planning courses in University (Belém), administration city and state planning (Belo Horizonte, Minas Gerais), assistance to University of Bahia in public administration courses, strengthening of administration on federal, state, and municipal levels.
Chile	1952	Public administration and technological planning.
Colombia	1953	Training only.
Costa Rica	1952	Municipal government administration, government-wide reorganization and management, tax studies and administration, training.
Cuba	1952	Pure food and drug survey, census and statistical organization, census project, training.
Ecuador	1952	Advisory service National Planning Board, postal management, training.
El Salvador	1952	Economic development, tax survey, training.
Guatemala	1955	Assistance to government in strengthening its program for economic development, public finance, and public administration related to these fields.
Honduras	1952	Census and statistics, tariff and customs procedures, training.
Mexico	1955	Consultant in fire department services, training.
Nicaragua	1952	Training only.
Panama	1952	Records management and government organization, contract with University of Tennessee, technical consultation.
Paraguay	1952	Budget administration, procurement training, government-wide management and reorganization, statistics—general and census, tax studies and administration.
Peru	1952	Records management, census advisory services, training.
Uruguay	1952	Government organization and management, statistics and census, records management, administrative reorganization of ministry of public health, development of recommendations for modern procurement legislation and organization.

Table 36 Summary of IIAA Technical Cooperation Programs in Industry and Mining

Country	Program Started	Projects in Operation, 1955
Bolivia	1953	Geology, petroleum code legal expert.
Brazil	1948	U. S. Geological Survey—mineral resources investigation, training in chemical plant and other special engineering (10 year contract), and Bureau of Mines (10 year contract).
Chile	1952	Industrial servicio and geology, apprentice and management training.
Colombia	1952	Technical assistance in improving methods of coal mining in the Cauca Valley, training, electric power development.
Costa Rica	1953	Assessment of industrial needs and potential, training.
Cuba	1953	Mineral analysis and development, basic geological research, industrial survey, appraisal of mineral resources.
Dominican Rep.	1953	Hydroelectric and irrigation survey, Carmet Installation (meteorological reporting station).
Ecuador	1952	Industry development, manual arts—*Industrial and Manual Arts Servicio.*
El Salvador	1952	Industrial productivity center, administration, training—servicio established in January 1955.
Guatemala	1955	Telecommunications survey, industrial development, training.
Mexico	1953	Contribution to Industrial Productivity Center (meat slaughter, industrial safety, shoe industry, textile industry, industrial management, management round table series, fruit and vegetable preservation, silver industry, tanning industry, tool design). Bureau of Mines technical assistance —mobile laboratory demonstration, U. S. Geological Survey instrument calibration technician; mineral resources investigation; USGS training; applied geophysics—training in standardization and calibration. Armour Institute of Technology providing research techniques to facilitate industrial protection.
Panama	1953	Consultation, small industry survey (contract).
Paraguay	1953	Training only.
Peru	1953	Advisory services in mineral resources and mining metallurgy, coal mining and minerals, textile engineering instruction, industrial development.
Uruguay	1953	Industrial management and productivity training.
Br. Guiana	1955	Short-term consultants, U. S. Geological Survey.

Table 37 Summary of IIAA Technical Cooperation Programs in Labor

Country	Program Started	Projects in Operation, 1955
Bolivia	1954	Training only.
Brazil	1954	Training in various fields of labor and of trade and union leaders.
Chile	1954	Industrial safety.
Colombia	1954	Training in labor-management relations.
Costa Rica	1954	Labor relations seminar and training.
Cuba	1954	Labor relations training.
Ecuador	1954	Training.
El Salvador	1954	Training and technical labor services.
Guatemala	1955	Training.
Honduras	1954	Training.
Mexico	1954	Training.
Nicaragua	1954	Training in labor-management relations.
Panama	1954	Training.
Peru	1954	Training and cooperative employment services.
Uruguay	1953[1]	Technical assistance in industrial safety; training in trade union organization, labor-management relations, and industrial safety.

[1] This project in industrial safety dates back to 1946 when a technician was assigned to Uruguay under the Department of State. In 1953, a technician was assigned to Uruguay under IIAA for two years. A safety organization of sound concept has now been established and a core of Uruguayans have received intensive training to carry out the program. Thus, U. S. technical assistance was discontinued in this project at the end of June 1955.

Table 38 Summary of IIAA Technical Cooperation Programs in Transportation

Country	Program Started	Projects in Operation, 1955
Bolivia	1948	Civil aviation mission, highways and public roads.
Brazil	1953	Training in civil aviation, highway transportation, and railroad administration, installation of air navigational aids in international airports at Rio and São Paulo, and training in operation and maintenance of navigational aids.
Chile	1953	Air transportation and civil aviation development, farm-to-market roads.
Colombia	1952	Assistance in airport designing and river navigation, training in transportation.
Costa Rica	1952	Consultation to Pacific Railway, air transportation (Civil Aeronautics Administration mission), training, farm-to-market roads.
Dominican Rep.	1955	Training, Inter-American Highway.
Ecuador	1952	Civil aviation, railroad consultation, communication and transportation advisory service for National Planning Board.
Guatemala	1955	Training.

(more)

Table 38 (continued)

Honduras.....	1952	Highway survey, development, and training; civil aviation technical assistance, port development survey.
Mexico........	1953	Public works and highway officials seminar, air transportation training.
Nicaragua.....	1954	Civil aviation assistance, including training.
Panama.......	1952	Civil Aeronautics Administration mission, training in maintenance and operation of airport equipment.
Paraguay......	1952	Trans-Chaco road project, airport development, training of key personnel of Ministry of Public Works in road construction and maintenance, improvement of river transportation.
Peru..........	1952	Rehabilitation of Peruvian Merchant Marine and other transportation advisory services.
Uruguay......	1955	Civil aviation technical assistance including training. Also training in traffic engineering.

Table 39 Summary of IIAA Technical Cooperation Programs in General Community Development

Country	Program Started	Projects in Operation, 1955
Brazil.........	1953	Housing and shelter improvement programs (3 community and area development projects include assistance in agriculture, education, health, child welfare administration).
Chile.........	1954	Housing joint fund agreement—self-help housing, in-service training, organization, and social welfare.
Colombia......	1953	Project in housing development, including training.
Costa Rica....	1955	Housing, training in social welfare.
El Salvador....	1954	Planning survey, training.
Nicaragua.....	1953	Assistance in urban planning.
Panama.......	1954	Consultation in social welfare services and in medical social welfare, public health services, training.
Paraguay......	1955	Technical assistance to social welfare education.
Uruguay......	1955	Training in rehabilitation of mentally retarded children and vocational rehabilitation.
Br. Guiana....	1954	Community development and self-help housing.

Table 40 — Summary of Servicios in Latin America 1955

Country	Health Sanit.	Edu.	Agric. Nat. Res.	Ind.	Other	Total
Bolivia	1	1	1			3
Brazil	1	1	1			3
Chile	1		1	1		3
Colombia	1		1			2
Costa Rica	1		1			2
Dominican Republic		1	1			2
Ecuador	1	1	1	1		4
El Salvador	1		1	1		3
Guatemala	1	1	1			3
Haiti	1	1	1			3
Honduras	1	1	1			3
Mexico[1]	1					1
Nicaragua	1	1	1			3
Panama	1	1	1			3
Paraguay	1	1	1			3
Peru	1	1	1[2]		2[3]	5
Uruguay	1[4]					1
Venezuela	1					1
Surinam (combined services, covering agriculture, housing, education, and health)						1
Totals	17	11	15	3	2	49

[1] There is a joint fund arrangement at the Industrial Productivity Center whereby U. S. and Mexican governments put in $50,000 each.

[2] There were two servicios in agriculture from 1952 to 1954.

[3] One servicio in Peru is for employment services and the other is for programs in industry, transportation, and irrigation.

[4] On June 30, 1955, all of the projects of the health servicio were absorbed by the existing program of the Ministry of Public Health. This program has entered a new phase providing U. S. consultant services to assist in developing and strengthening health services throughout the country.

Table 41 **UN Expanded Technical Assistance Program in Latin America, Amounts Obligated by Countries and Specialized Agencies, 1954**

Country or Territory	UNTAA	ILO	FAO	UNESCO	ICAO	WHO	Total
	(thous. $ U. S. equiv.)						
Bolivia	$ 214[1]	$ 27	$ 1	$ 25	....	....	$ 267
Brazil	127	51	148	40	....	....	366
Br. Guiana	2	....	19	.....	....	....	21
Chile	18	3	231	.....	....	....	252
Colombia	79	27	39	32	$ 1	$ 31	209
Costa Rica	10	....	14	43	6	43	116
Cuba	11	13	......	.....	....	....	24
Dominican Rep.	21[2]	11	3	.....	....	9	44
Ecuador	100	26	105	22	2	14	269
El Salvador	6	25	20	18	22	60	151
Guatemala	6[3]	31	1	52	2	....	92
Haiti	49[4]	62	29	9	....	5	154
Honduras	......	....	59	.....	....	....	59
Jamaica	16	....	3	.....	....	....	19
Mexico	12	....	68	18	62	17	177
Nicaragua	31	....	39	3	1	5	79
Panama	13	....	29	3	2	64	111
Paraguay	41	....	34	.....	....	124	199
Peru	21	3	2	46	....	69	141
Uruguay	4	....	14	14	....	....	32
Venezuela	36	37	12	20	....	....	105
Regional Projects	298	235	152	156	2	183	1,026
Trinidad	......	....	5	4	....	....	9
Total	$1,115	$551	$1,027	$505	$100	$624	$3,922

[1] Three for WMO.
[2] WMO.
[3] In addition, six on "reimbursable cost basis."
[4] Two for WMO.
SOURCE: *Seventh Report of the (UN) Technical Assistance Board*, New York, 1955, E/2714, E/TAC/-REP/35, Supplement No. 4, page 257.

Table 42 Percentage Distribution of UN Technical Assistance Funds in Latin America by Major Fields of Activity, 1953 and 1954

Field of Activity	1953	1954
Health and Sanitation	14.6%	14.2%
Education	7.5	6.8
Agriculture and Natural Resources	21.3	24.5
Public Administration	26.8	19.2
Labor	8.5	7.5
Industry and Mining	2.9	6.6
Transportation, Communication, and Power	5.4	4.5
Community Development, Social Welfare, and Housing	13.0	16.7
Total	100.0	100.0

SOURCE: Adapted from *Seventh Report of the TAB, op. cit.*, Annex IB, pages 254-6.

Table 43 OAS Expenditures and Obligations for Technical Cooperation by Fields of Activity, 1951 through 1955

Field of Activity	(thous. $)				
	1951	1952	1953	1954	1955
Health, Welfare, and Housing[1]	$ 69	$262	$ 324	$ 254[2]	$ 248
Education[3]	....	....	12	171	173
Agriculture, Forestry, and Fisheries[4]	272	559	753	915	744
Natural Resources[5]	....	18	77	143	145
Public Administration[6]	....	69	172	165	161
Project Total	341	908	1,338	1,648	1,471
Over-all Administrative Expense	48	72	72	85	79
Total	$389	$980	$1,410	$1,733	$1,550

[1] This category includes "Workshop on Communicable Disease Nursing" for 1951 only; "Training Center for Directors of the Cooperative Movement" for 1951-1953 inclusive; "Inter-American Housing Center" for the entire period; "Workshops on Administration of Children's Services" for 1952-1955 inclusive.

[2] Does not include $160,000 for two projects (Nos. 23 and 31) which did not get underway in 1954.

[3] This project is "Inter-American Rural Normal School," active from 1953-1955 inclusive.

[4] Projects include "Technical Education for the Improvement of Agriculture and Rural Life" and "Pan American Aftosa Center" for the entire period.

[5] This is the "Inter-American Training Center for the Evaluation of Natural Resources," active from 1952-1955 inclusive.

[6] "Inter-American Training Center for Economic and Financial Statistics," 1952-1955 inclusive.

NOTE: The figures for 1951 are actual expenditures after liquidation of all obligations; for 1952 and 1953, they represent actual expenditures plus unliquidated obligations; 1954 and 1955 are amounts approved by the Inter-American Economic and Social Council. All figures have been rounded.

SOURCE: See note in introduction to Appendix, page 141.

Table 44 **Contributions to OAS Technical Cooperation Programs by Member Countries, 1951 through 1955**

(calendar years, thous. $)

Member Country	1951 Paid	1952 Paid	1953 Paid	1954 Pledged	1955 Pledged
Argentina	$ 87.9	$ 87.9	$ 87.9	$ 100.0	$ 100.0
Bolivia	....	[1]	....	7.4	7.4
Brazil	128.4	128.0	128.0	150.0	150.0
Chile	23.4	23.4	23.4	34.5	34.5
Colombia	26.9	26.9	39.5	39.5	39.5
Costa Rica	2.4	2.4	3.6	3.6	3.6
Cuba	17.1	17.1	17.1	17.1	17.1
Dominican Rep.	4.6	5.3	6.7	6.7	6.7
Ecuador	6.1	6.1	[2]	7.0	9.0
El Salvador	4.6	4.6	4.6	4.6	6.7
Guatemala	5.0	5.0	5.0	5.0	7.0
Haiti	2.0	2.0	2.0	2.0	2.0
Honduras	3.1	3.5	3.5	4.6	4.6
Mexico	14.8	....	35.0	....	24.0
Nicaragua	3.0	3.0	3.0	5.0	5.0
Panama	2.7	2.7	2.7	4.0	4.0
Paraguay	....	....	5.0	5.0	5.0
Peru	17.5	....	....	....	14.0
United States	882.1	724.6	808.3	1,000.0	1,135.7
Uruguay	19.1	19.1	13.9	13.9	13.9
Venezuela	13.8	12.9	22.7	22.3	34.0
Total	$1,264.5	$1,074.5	$1,211.9	$1,432.2	$1,623.7

[1] $7,300 was pledged but not paid.
[2] $6,100 was pledged but not paid.
SOURCE: "Cuenta Especial Programa de Cooperación Tecnica de la Organizacion de los Estado Americanos, Estados de los Ofrecimientos y Pagos Hechos Al Programa de Cooperación Tecnica," 10 October, 1955.

Table 45 Proportionate 1954 Allocations of U. S., UN, and OAS Funds to Technical Cooperation by Fields of Activity

(thous. $ and percentages)

Field	U. S.		UN		OAS		Total	
Agriculture, Forestry, and Fisheries	$ 8,289	36%	$1,198	28%	$ 915	51%	$10,402	36%
Health, Welfare, and Housing	6,212	27	1,048	25	414	23	7,674	26
Education	3,253	14	527	13	171	9	3,951	14
Natural Resources	1,045	4	87	2	143	8	1,275	4
Industry and Labor	1,967	8	520	12	.....	...	2,487	8
Transportation	1,051	5	51	1	.....	...	1,102	4
Public Administration	1,145	5	396	9	165	9	1,706	6
General Economic Planning	212	1	168	4	.....	...	380	1
Other	......	...	258	6	.....	...	258	1
Total	$23,174	100%	$4,253	100%	$1,808	100%	$29,235	100%

NOTE: This table, published in 1954 in *Report of the Secretariat of the Inter-American Social and Economic Council on Technical Assistance Activities in Latin America* (Pan American Union, September 15, 1954; pages 33-34, figures rounded), shows the proportion of funds allocated to each field by each agency. The classification of programs by field of activity is not identical with that used in other tables in this Appendix, and the figures have been revised since the table was prepared. Figures for 1954 as shown in Table 1 have been used in the text of our report.

Table 46 **Development Loans to Latin America by the Export-Import Bank, and the World Bank**

Year	(million $ U. S.) Export-Import Bank	World Bank
1938	$ 5.5	
1939	24.0	
1940	56.0	
1941	85.7	
1942	79.4	
1943	16.8	
1944	19.4	
1945	73.8	
1946	6.7	
1947	25.0	
1948	34.6	$ 16.0
1949	27.5	99.1
1950	110.7	58.5
1951	140.6	75.8
1952	134.5	79.0
1953	7.6	29.3
1954	n.a.	98.5
1955	n.a.	123.0
Total	$847.8	$579.2

NOTE: The data (on a calendar year basis) for the development loans of the Export-Import Bank are from an unpublished study by John V. Deaver of the Project staff. Mr. Deaver classified as development loans those oriented primarily toward promoting economic growth. His study did not cover 1954 and 1955. The data (fiscal year basis) for the World Bank loans were assembled from its *Tenth Annual Report* (1954-55), Appendix F. *All* of the World Bank's loans were classified as development loans.

Table 47 U. S. Private Investments in Latin America Selected Years (million $)

47a. Value of U. S. Investments in Latin America, by Industry

	1946	1949	1952	1953	1954
Total (Direct and Portfolio)	$4,009	$5,556	$7,018	$7,051	$7,710
Direct, Total	3,045	4,590	5,758	6,034	6,256
Agriculture	407	513	564	568[1]	591[1]
Mining and Smelting	506	595	871	999	1,003
Petroleum	697	1,467	1,577	1,684	1,688
Manufacturing	399	667	1,166	1,149	1,248
Public Utilities	920	1,035	1,076	1,093	1,120
Distribution (Trade)	72	212	344	354	402
Other Industries	45	102	162	187	204
Portfolio, Total	964	966	1,260	1,017	1,454
Long-term	558	411	391	365	491
Short-term	406	555	869	652	963

[1] Unpublished figures.

Source: 1946 through 1952 from *United States Investments in Latin America*, prepared by the Office of Business Economics, U. S. Dept. of Commerce, and published by Time-Life International for distribution at the Inter-American Investment Conference, Feb. 1955, page 5. The 1953 (revised) and 1954 (preliminary) figures are from *Survey of Current Business*, U. S. Dept. of Commerce, August 1955, Table 2, page 12 and Table 3, page 16. Long-term portfolio investments include foreign dollar bonds, foreign currency securities, and "other"; short-term are deposits and "other".

47b. Earnings of U. S. Direct Investments in Latin America, by Industry

Year	Total	Petroleum	Manufacturing	Mining Smelting	Other Industries
1946	$347	$112	$ 67	$ 39	$129
1947	521	188	106	64	163
1948	672	301	113	85	173
1949	475	203	96	51	125
1950	616	274	106	69	167
1951	888	409	170	104	205
1952	888	438	156	96	198
1953	747	409	122	45	171
1954	751	380	123	73	175

Source: *United States Investments in Latin America, op. cit.*, page 17 for 1946 through 1953; 1954 (preliminary) figures are from *Survey of Current Business, op. cit.*, Table 12, page 20. (Latin American totals have been revised in Table 12 as follows: 1950-631, 1951-901, 1952-902, 1953-722.) "Earnings" is the sum of income and undistributed subsidiary earnings.

Table 48

Index Numbers of Agricultural and Industrial Production Selected Countries, 1951 to 1954

48a. FAO Index Numbers of Agricultural Production (Prewar = 100)

Country	Food				All Commodities			
	50–51	*51–52*	*52–53*	*53–54*[1]	*50–51*	*51–52*	*52–53*	*53–54*[1]
Argentina[2]	101	104	89	113	100	101	87	109
Brazil[3]	120	123	125	128	119	121	126	127
Chile[2]	121	127	125	138	121	127	124	135
Colombia[2]	162	176	174	175	162	176	175	176
Cuba	154	176	143	140	154	175	143	142
Mexico	147	153	154	160	160	168	167	174
Peru[2]	140	144	144	151	130	136	138	144
Uruguay[2]	115	123	123	128	119	130	132	135
United States	138	136[3]	148[3]	147[3]	131	134[3]	144[3]	144[3]

[1] Preliminary.
[2] Index numbers refer to calendar years 1950, 1951, 1952, and 1953.
[3] Calendar years 1951, 1952, 1953.
SOURCE: *Yearbook of Food and Agricultural Statistics, 1954*, FAO, Rome, Italy, 1955, Vol. VIII, Part 1, "Production," Table 143, page 297.

48b. Index Numbers of Industrial Production (1948 = 100)

Country	1951	1952	1953	1954
Argentina (Index includes mining, manufacturing, electricity, manufactured gas)	103	97	96	103
Brazil[1] (Includes mining, manufacturing, electricity, manufactured gas, construction)	129	137	146	156
Chile (Includes manufacturing, electricity, manufactured gas, construction)	119	131	143	149
Guatemala (Includes manufacturing, electricity, manufactured gas)	105	110	108	110
Mexico (Includes mining, manufacturing, electricity, manufactured gas)	127	130	133	141
United States[2] (Includes mining, manufacturing)	115	119	129	120

[1] From Getulio Vargas Foundation. Adjusted for seasonal variations and for length of month.
[2] Adjusted for number of working days.
SOURCE: UN *Monthly Bulletin of Statistics*, Nov. 1955, Table IV, 8, pages 20-24.

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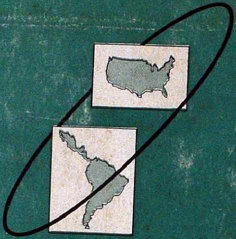
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